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ABSTRACT

The evaluation of the third year of Project OMEGA, an experience-based career education project, focused on three general areas of student ability: career education knowledge, basic skills, and competency in career areas. Experimental and control groups were assessed using the Comprehensive Test of Basic Skills, Career Education Skills Tests, and competency report including a measure on 13 competencies concerning whether community certification could be shown, and a teacher's scaled work evaluation. In addition to a statistical analysis, a comparative analysis was made to the first and second year of project operation. Surveys of parent and employer attitudes were also conducted. Over the two years of evaluation, the statistical analysis demonstrated that the program was successful in providing better career knowledge gains in students while not hindering their basic skills development. Generally little difference in basic skills was found between experimental and control groups. When a difference was found, it was generally in the direction of a higher score for the experimental group. In no case did the experimental group appear to suffer in their basic skills. Regarding the career education gain scores, it was apparent that the greatest gain was in grade 12 students, and particularly in females. (Appendixes, amounting to approximately one-half of the report, include the instruments used, detailed instrumentation evaluation, and evaluation summary.) (YLB)

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# PROJECT OMEGA

# EXPERIENCE BASED CAREER EDUCATION

## THIRD YEAR EVALUATION AND

## PROJECT SUMMARY

FINAL REPORT

JANUARY 1980

CE 025 054

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PROJECT OMEGA

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TABLE OF CONTENTS


LIST OF TABLES ..... iv

Chapter

I BACKGROUND ..... 1

Project Objectives ..... 1
Scope of Work ..... 5
Report Format ..... 6
Time-Line ..... 6

II METHODS AND PROCEDURES ..... 8

Research Design ..... 8
Career Education Knowledge
Basic Skills
Competency in Career Areas
Summary
Sampling ..... 10
Instrumentation ..... 10
Statistical Analysis ..... 14
Presentation Format ..... 15

III FINDINGS AND CONCLUSIONS ..... 17

Comprehensive Test of Basic Skills ..... 17
Career Education Knowledge Test ..... 37
Comparative Analysis, Years 2 & 3 ..... 60
Future Study ..... 61
Parent's Attitudinal Data ..... 62
Employer Attitudinal Data ..... 66
Conclusions ..... 71

APPENDICES ..... 73

## LIST OF TABLES


Objective Data Testing Time Table ..... 7

Table A—Goals and Respective Item Numbers, Career Skills Test ..... 12

| Table No. | | |
|---|---|---|
| 1 | Basic Skills Pre-Test, All Cases ..... | 18 |
| 2 | Basic Skills Post-Test, All Cases ..... | 20 |
| 3 | Basic Skills Gain Scores, All Cases ..... | 21 |
| 4 | Basic Skills Pre-Test, Grade 11 ..... | 23 |
| 5 | Basic Skills Post-Test, Grade 11 ..... | 24 |
| 6 | Basic Skills Gain Scores, Grade 11 ..... | 25 |
| 7 | Basic Skills Pre-Test, Grade 12 ..... | 27 |
| 8 | Basic Skills Post-Test, Grade 12 ..... | 29 |
| 9 | Basic Skills Gain Scores, Grade 12 ..... | 30 |
| 10 | Basic Skills Pre-Test, Males ..... | 31 |
| 11 | Basic Skills Post-Test, Males ..... | 33 |
| 12 | Basic Skills Gain Scores, Males ..... | 34 |
| 13 | Basic Skills Pre-Test, Females ..... | 35 |
| 14 | Basic Skills Post-Test, Females ..... | 36 |
| 15 | Basic Skills Gain Scores, Females ..... | 38 |
| 16 | Career Education Gain Scores, All Cases ..... | 39 |

| Table No. | | |
|---|---|---|
| 17 | Career Education Pre-Test, Grade 11 ..... | 42 |
| 18 | Career Education Post-Test, Grade 11 ..... | 43 |
| 19 | Career Education Gain Scores, Grade 11 ..... | 44 |
| 20 | Career Education Pre-Test, Grade 12 ..... | 46 |
| 21 | Career Education Post-Test, Grade 12 ..... | 47 |
| 22 | Career Education Gain Scores, Grade 12 ..... | 48 |
| 23 | Career Education Pre-Test, Males ..... | 51 |
| 24 | Career Education Post-Test, Males ..... | 52 |
| 25 | Career Education Gain Scores, Males ..... | 53 |
| 26 | Career Education Pre-Test, Females ..... | 54 |
| 27 | Career Education Post-Test, Females ..... | 55 |
| 28 | Career Education Gain Scores, Females ..... | 56 |
| 29 | Competency Report Summary ..... | 59 |
| 30 | $(CE)_2$ Program—Parent Opinion Survey ..... | 63 |
| 31 | $(CE)_2$ Program—Employer Opinion Survey ..... | 67 |

# CHAPTER I

# BACKGROUND

## Project Objectives

Project OMEGA can perhaps best be summarized by a review of the project objectives. From its inception the project has had eight major student goals, with a total of 27 student objectives. At the end of summer 1978 a ninth major goal was added, along with an additional seven student objectives. *The data collection of these career education goals was the level at which the evaluation was directed. Below are listed the nine major goals (Roman numerals) and the 34 student objectives (Arabic numerals).*

I. Self-Analysis

1. Students should analyze the interrelationship of lifestyles, interests and aptitudes in relation to potential career choices.

2. Students should identify personal strengths and deficiencies in skills, knowledge and attitudes in relation to potential career choices.

3. Students should examine the influence of family, peer and societal expectations on potential career choices.

II. Socio-Economic Issues and Trends in the World of Work

4. Students should have a basic understanding of the social, governmental and economic system in America and how it relates to potential careers and to their general welfare.

5. Students should analyze the work ethic in America for its national and personal significance.

6. Students should have an understanding of management and labor relationships in America, including a historical perspective on the labor movement and its economic-social impact and current labor-management relationships.

7. Students should understand the concepts of employment, unemployment and under-employment in relation to potential career choices.

8. Students should become aware of local and national economic and occupational trends, recognize growth, declining and emerging industries and occupations.

9. Students should be aware of the nature and effects of all types of job discrimination.

III. Matching Specific Job Information With Interests, Aptitudes, Abilities and Career Goals

10. Students should be able to compare job information with their interests, values and abilities and make decisions about further investigation and/or participation in career areas of their choice.

11. Students should outline strategies toward achieving tentative career goals, including strategies to improve skills and knowledge deficiencies to reach those goals.

12. Students should examine career possibilities in view of the demands these careers make on their personal life.

IV. Job Finding and Job Applications

13. Students should be able to use a variety of sources to locate available jobs.

14. Students should know the benefits and liabilities of using public and private employment agencies.

15. Students should be able to interview successfully for jobs.

16. Students should be able to write personal resumés.

17. Students should be able to use and understand the social security and state industrial accident systems, unemployment and so forth.

V. Work Interactions and On-the-Job Negotiation

18. Students should be able to interact successfully with supervisors and coworkers on jobs of their choice by recognizing rules of the shop, product expectations and team work habits.

19. Students should understand the nature of organizations, including organizational needs and structures, and should examine the impact of those structures on themselves.

20. Students should identify the company or business organizational structure and examine the impact of that structure on their working roles.

VI. Developing Entry Level Work Skills

21. Students should have the opportunity, when desired, to develop specialized entry skills in potential careers or jobs.

22. Students should develop some general job skills in a variety of occupational settings.

VII. Career Training

23. Students should identify public and private train- opportunities available in career areas of their choice.

24. Students should be aware of costs and alternatives for financing training in careers of their choice.

VIII. Psychological Considerations

25. Students should understand the psychological income of various careers in terms of pride in work, service to others and self-satisfaction and fulfillment.

26. Students should be aware of the benefits, problems and pressures of retraining as mid-career adults and as individuals who choose to enter fields that traditionally may not have accepted certain people.

27. Students should understand the problem of mobility within the job itself, in addition to geographic mobility.

XI. Sex Discrimination

28. Students should be able to assess, analyze and increase knowledge of, attitude towards and awareness of sex-bias and sex-stereotyping, and to strengthen the self-concept as a worthwhile person.

29. Students should know the basic facts and statistics regarding male and female participation in the paid work force.

30. Students should understand and define basic terminology related to sex-bias and sex-stereotyping.

31. Students should understand general attitudes toward sex roles and be able to assess their own beliefs in this area.

32. Students will identify the presence of sex-bias and sex-stereotyping in day-to-day social situations, in school practices and instructional materials, in work situations, in the media, and in employment situations.

33. Students should identify limitations placed upon people because of sex-bias and sex role stereotyping.

34. Students' self-confidence in their rights, identity and self-worth will be strengthened in the areas of family member, worker, citizen, and individual.

Scope of Work for Principal Investigators

Further, the scope of work defined for the principal investigators on the project was as follows:

1. *Examine existing program goals and objectives* and, in conjunction with $(CE)_2$ staff, make any necessary wording modifications to more accurately and concretely describe the ultimate effects of the program.

2. *Examine* and refine, if necessary, the *instruments* necessary to assess the attitudes of parents, students, employers, and counselors toward the program.

3. *Continue and further develop,* if necessary, *the system for monitoring and collecting process data* for feedback to project director and staff for program decision-making.

   Includes: *Periodic inspection* of student performance records including career explorations, competencies, projects, etc.

   *Periodic inspection* of program activities to determine their correlation with planned tasks and time-lines.

4. *Pre- and post-testing of project* group students and *control* group students using selected sections of the *CTBS* and the *Career Education Skills* test. Project staff will assist in this task.

5. *Coordinate data collection* for the above numbers 2, 3, and 4, and undertake a complete analysis of the data.

6. Undertake *case studies of a random sample* of participating students (5). These would include reports of the experiences and growth as perceived by the students as a result of their involvement in the program.

7. *Examine* and refine, if necessary, *the evaluation procedure for the summer session for the gifted and talented.*

8. *Assist* in the preparation of the *quarterly reports,* especially the evaluation section.

9. *Complete a final* end-of-third year *evaluation report* and end-of-third year project evaluation report.

10. *Represent the project* at program evaluation visitations.

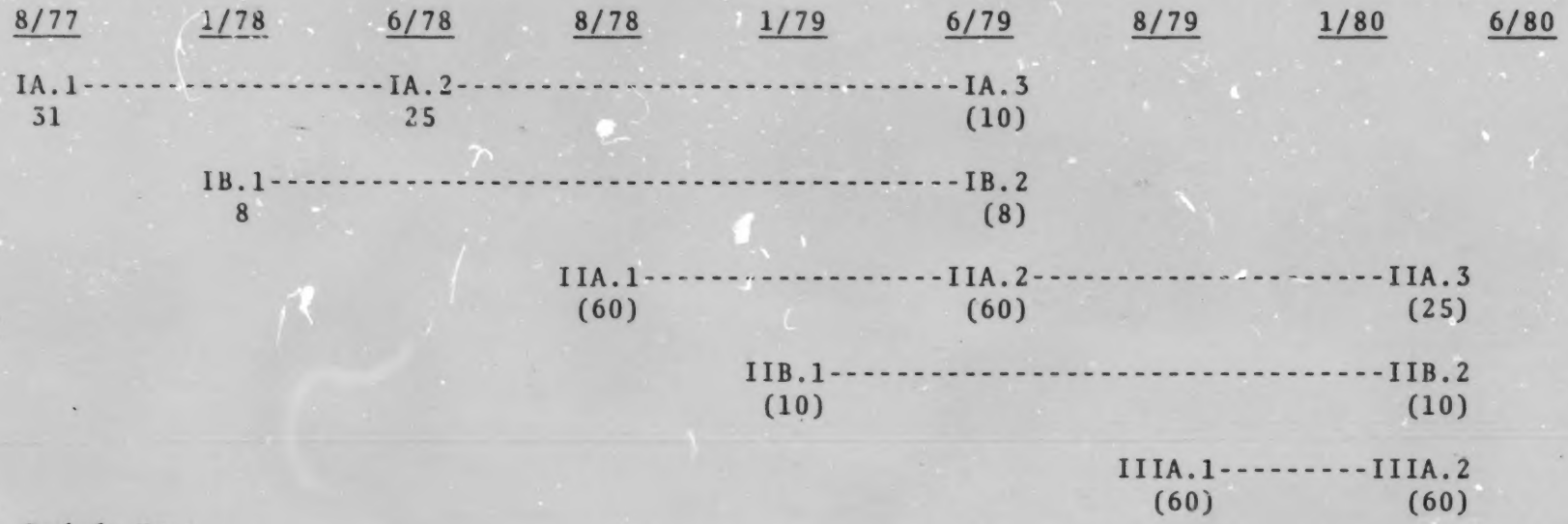
Report Format

The current report will detail the final (third) year evaluation findings and, additionally, will comparatively analyze these final year findings in relation to previous project years.

Time-Line

The time-line for this project is best summarized by the following diagram (page 7).

## OBJECTIVE DATA TESTING TIME TABLE




*Symbols Key*

*Roman Numerals = Year of Project Operation*
*A = Group Starting in First Semester*
*B = Group Starting in Second Semester*
*Decimal Number = Number of Times Group was Tested*
*Under Number = Actual (and Estimated) Number of Students in Each Group*

# CHAPTER II

## METHODS AND PROCEDURES

Chapter II describes the methods and procedures used in the evaluation of Project OMEGA; specifically, the topics of research design, sampling, instrumentation, and the statistical analyses are described.

### Research Design

Project OMEGA was designed to evaluate three general areas of student ability:

1. Career Education Knowledge
2. Basic Skills
3. Competency in Career Areas

The above areas were evaluated using a series of instruments and integrated sub-instruments. Each general area will be presented and discussed individually below.

#### *Career Education Knowledge*

A pre-test and post-test on both experimental and control groups was utilized to test for the career education knowledge area; thus, an analysis of gain scores was used to evaluate project effectiveness in this area.

*Basic Skills*

Similar to the career education knowledge area discussed above, the basic skills demonstrated by students was tested by a pre-test and a post-test method on both experimental and control groups. An analysis of the gain scores was used to evaluate the differences in basic skill learning between the experimental and control groups.

*Competency in Career Areas*

Competency of students in the experimental group was evaluated by a competency check list. This check list depicted various competency levels for various career areas. Although no formal statistical tests were applied to this data, the frequency distributions and statistics from those distributions yielded interesting results in the competency area. This analysis, although less qualitative in nature than the previous two research areas discussed above, did give useful insight into the practical significance of the career education training program at the Wayne-Westland schools.

*Summary*

Through the various means described above, Project OMEGA's effectiveness was statistically and qualitatively assessed. The sampling, instrumentation and statistical analysis sections to follow will depict in greater detail how this research design was implemented.

Sampling

For both the career education knowledge area and basic skills area, both experimental and control groups needed to be selected for the project year. The experimental group was designated as the group having the career education training, while the control group had no such training. The sampling was stratified by sex and by grade levels 11 and 12. Subjects in both experimental and control groups were matched on grade point average, class and sex. Total sample sizes for the third year evaluation were, for the experimental group forty students, and for the control group thirty-three students. For the basic skills segment, sample sizes were forty-one students in the experimental group and thirty-two students in the control group.

Instrumentation

As mentioned previously, the evaluation involved three specific instruments. These instruments measured basic skills, career knowledge, and a career competency report. The basic skills were tested by the *Comprehensive Test of Basic Skills*, Level IV, Form S, in the sections of reading comprehension, language mechanics, mathematics concepts and mathematics applications.

As done in the previous year the project staff reviewed the content of this instrument in late spring 1978 and found

it to be a reasonable measurement of those basic skills on which the students should be tested.

Since Project OMEGA was concerned if experimental group students suffered in terms of basic skills development as a result of being in the career education training program, this evaluation of experimental versus control students on the basic skills was of importance.

The second instrument to be considered is the *Career Education Skills Test*. This test was developed to evaluate career education knowledge gained. In the experimental and control group design it was hypothesized that experimental group students would score significantly higher gain in career knowledge than would their control group counterparts, while suffering no loss in basic skills level.

Since career education knowledge is the focal point of this evaluation, the *Career Education Skills Test* should be discussed in greater detail.

The *Career Education Skills Test* is made up primarily of items contained in the original *Texas Career Education Measurement Series*. Below are listed the project goals and the instrument grouping titles to show the relationship between the two (see Table A on page 12).

The *Career Education Skills Test* is also a revision of the *End-of-Year Questionnaire* which was used during the first year of the project. The first instrument contained 106 items,

| Project Goals | Instrument Grouping item numbers | |
|---|---|---|
| I. Self Analysis | # 1-11 | Career Planning & Decision Making |
| II. Socio-Economic Issues and Trends in the World of Work | #19-32 | Economic Factors Influencing Career Opportunities |
| III. Matching Specific Job Information With Interests, Aptitudes, Abilities, and Career Goals | #50-57 | Career Interests, Planning & Decision Making |
| IV. Job Finding and Job Applications | #12-18 | Job Acquisition and Retention |
| V. Work Interactions and On-the-Job Negotiation | #12-18 | Job Acquisition and Retention |
| VI. Developing Entry Level Work Skills | No specific test items were used. | |
| VII. Career Training | #33-49 | Education/Career Opportunity Relationships |
| VIII. Psychological Considerations | No specific test items were used. | |
| IX. Sex Discrimination | #58-65 | Sex Discrimination |

including items from the *New Mexico Career Education Test*, and a collection of experimental items constructed by the former project evaluation team. The first instrument only contained the following sections in the present version: career planning, economic factors, job acquisition, and education career.

The present version of the career education instrument, the *Career Education Skills Test*, discontinued use of the New Mexico items and the experimental items because they had little or no relationship to the project goals. The sections on career interests and job discrimination were added so as to more completely measure the project goals. In the process, a desired reduction in the number of items from 106 to 65 was achieved. Thus, the *Career Education Skills Test*, in its present form for the third year, involved 65 items. The *Career Education Skills Test* in its entirety is shown in Appendix A.

A competency report was also filed for every student in the experimental group. This competency report included a measure on thirteen competencies, whether community certification could be shown, and the teacher's work evaluation on a one-to-ten scale. The competency report was an original instrument developed by the Wayne-Westland schools and the principal evaluator for the program.

Statistical Analysis

The statistical analysis for this evaluation was complex. In analyzing the basic skill levels of experimental and control group students on a pre- and post-test basis, the comprehensive test of basic skills was evaluated by a t-test on gain scores. The alpha level for the statistical test was predefined as .05. Statistical tests were performed for all experimental students versus all control group students and also compared by grade level and sex.

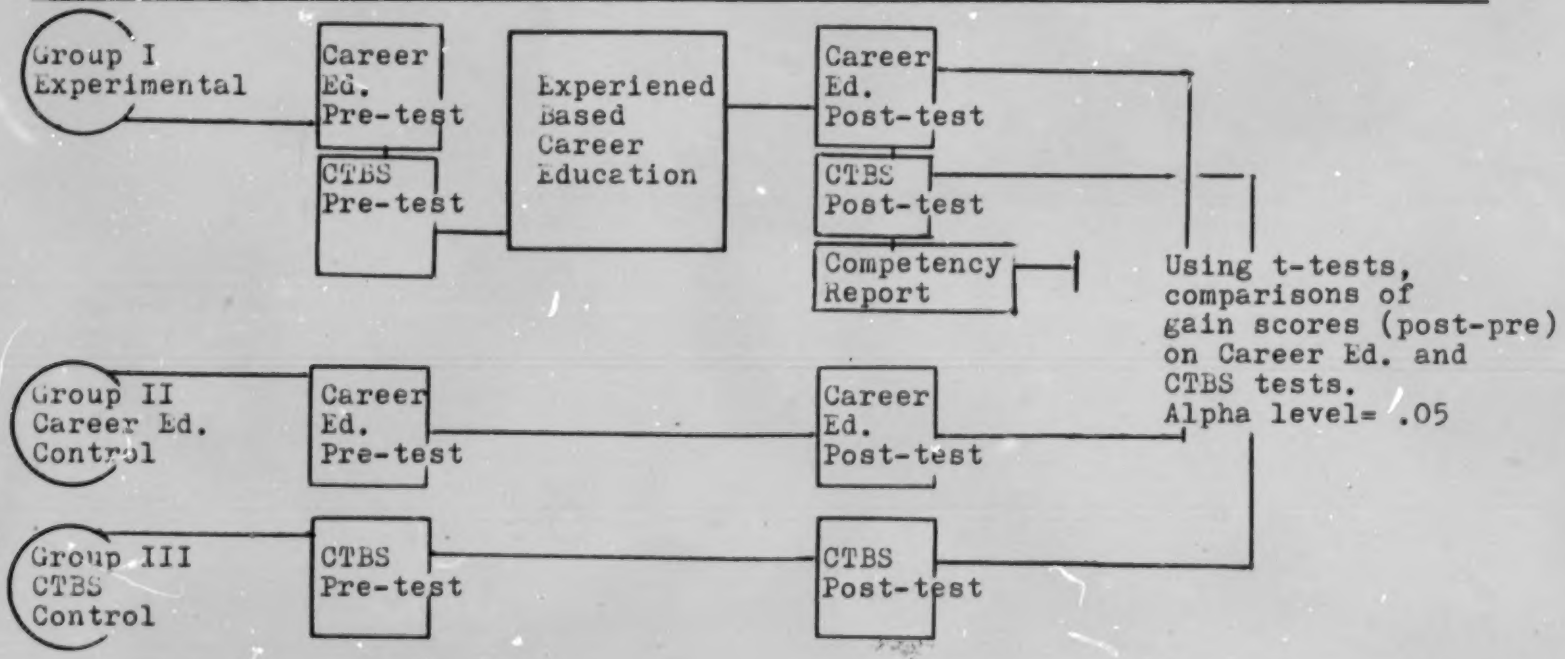
Similar to the evaluation for the basic skills, the career education knowledge segment of the evaluation was similarly constructed. Both experimental and control group gain scores were analyzed by the t-test at the alpha level preset at .05. Again, as in the previous case, t-tests were also established by grade level and by sex of subject. In this way, both the basic skills area and the career education knowledge area were thoroughly tested for statistical significance between experimental and control groups, both in total and in varying backgrounds.

For the competency reports, no statistical test was applied. However, frequency distributions and descriptive statistics were calculated. Such an analysis indicated the number of occurrences and mean scores for the various thirteen competencies listed. The competency report was filed for all students in the experimental group.

The final section of the statistical analysis involved a very thorough analysis of the test instruments themselves. Each of the three instruments was analyzed by the Lertap computer package available at Wayne State University, Detroit, Michigan. The Lertap analysis was comprised of an item analysis for every item on any given instrument, giving biserial and point-biserial correlations as well as descriminating indexes. Further, the test analysis provided a measure of internal consistency reliability based on the analysis of variance statistical procedure. The Lertap procedure was applied to both the basic skills test (the *Comprehensive Test of Basic Skills)* and the career education test (the *Career Education Skills Test)*.

Through this quantitative analysis of the test instruments, better instrumentation may be designed for the future. The item analysis provided should enable future researchers to reduce the number of items on each instrument while maintaining the instrument's effectiveness and reliability. The addition of the instrumentation evaluation section is an innovative one.

Statistical Analysis-Flow Chart Summary



# CHAPTER III

## FINDINGS AND CONCLUSIONS

Chapter III details the findings and conclusions for the third year evaluation of the project. Further, a comparative analysis to the first and second year of project operation will be made.

The chapter will begin with a review of the findings from the Comprehensive Test of Basic Skills. This will be followed by a review of the data from the Career Education Test. Next a review of the competency reports will be made.

Following these three sections an analysis of the instrumentation will be performed and, lastly, a comparative analysis to the first and second year of the project will be made. Numerous tables (included at the end of Chapter III) will present the statistical results in the order described above. The narrative will describe the findings shown in the tables.

### Comprehensive Test of Basic Skills

Table 1 indicates the data from the basic skills pretest for all cases. There were 41 subjects in the

Table 1
Basic Skills Pre-Test
All Cases

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 25.56 | 41 | 7.55 |
| Control | 23.03 | 32 | 9.13 |
| *Language Mechanics* | | | |
| Experimental | 12.41 | 41 | 3.53 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 13.83 | 41 | 4.77 |
| Control | 13.03 | 32 | 4.27 |
| *Mathematics Applications* | | | |
| Experimental | 10.49 | 41 | 5.26 |
| Control | 10.78 | 32 | 4.75 |

experimental or project group, and 32 subjects in the control group. A statistical analysis was performed on each of the four specific areas of the basic skills test; namely, reading comprehension, language mechanics, mathematics concepts, and mathematics applications. There were 41 subjects in the experimental group and 32 subjects in the control group. Table 1 indicates the mean or average score for each of the sub-test areas and the standard deviation for those mean scores.

Table 2 indicates the same information on the basic skills test for the post-test on all cases. Again, the mean, the number of cases, and the standard deviation are shown in the table.

Table 3 indicates the gain scores on all cases for the basic skills test. As shown in the previous two tables, the four sub-test areas are shown with experimental and control group means indicated, together with number of subjects and standard deviation. Additionally, the t-value from the t-test, together with the degrees of freedom and the associated probability level, are shown in the table. For the reading comprehension sub-test on the basic skills test there was no statistically significant difference in mean gain scores between the experimental and the control group. Likewise, for mathematics concepts, there was no statistically

Table 2
Basic Skills Post-Test
All Cases

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 27.80 | 41 | 7.32 |
| Control | 24.00 | 32 | 8.24 |
| *Language Mechanics* | | | |
| Experimental | 13.46 | 41 | 2.43 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 13.46 | 41 | 4.37 |
| Control | 12.41 | 32 | 4.72 |
| *Mathematics Applications* | | | |
| Experimental | 13.05 | 41 | 4.99 |
| Control | 10.66 | 32 | 5.55 |

Table 3
Basic Skills Gain Scores
All Cases

| | Mean | No. | S.D. | t | df | p |
|---|---|---|---|---|---|---|
| *Reading Comprehension* | | | | | | |
| Experimental | 2.24 | 41 | 2.95 | 1.21 | 45.46 | .23 |
| Control | .97 | 32 | 5.35 | | | |
| *Language Mechanics* | | | | | | |
| Experimental | 1.20 | 41 | 2.57 | | | |
| Control | - | - | - | | | |
| *Mathematics Concepts* | | | | | | |
| Experimental | -0.37 | 41 | 3.19 | .36 | 71 | .72 |
| Control | -0.63 | 32 | 2.83 | | | |
| *Mathematics Applications* | | | | | | |
| Experimental | 2.56 | 41 | 3.40 | 3.25 | 71 | .00 |
| Control | -0.13 | 32 | 3.64 | | | |

significant difference in mean gain scores between the experimental and the control group. Likewise, for mathematics concepts, there was no statistically significant difference in mean gain scores between the two groups. Lastly, however, in the mathematics applications section of the test, a significant mean gain difference was found between the experimental and the control groups, with the experimental group showing a mean gain of 2.56 units and the control group showing a mean gain score of -0.13. This difference in gain scores was significant at the .05 level. It should be noted that in the language mechanics sub-test, only the experimental group was given this portion of the basic skills test, therefore, for the balance of the analysis in the basic skills area, no experimental to control group comparisons could be made. The information in the tables for language mechanics are presented merely as descriptive pieces of data.

In analyzing the basic skills test in terms of grade level, Table 4 indicates the basic skills pre-test scores for grade 11.

Table 5 indicates the post-test basic skills scores, also for grade 11.

Table 6 indicates the basic skills gain scores for all eleventh graders. Again, students were divided by experimental

Table 4
Basic Skills Pre-Test
Grade 11

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 27.18 | 22 | 7.04 |
| Control | 21.24 | 21 | 9.14 |
| *Language Mechanics* | | | |
| Experimental | 12.27 | 22 | 3.83 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 14.14 | 22 | 4.54 |
| Control | 12.52 | 21 | 3.67 |
| *Mathematics Applications* | | | |
| Experimental | 10.50 | 22 | 5.36 |
| Control | 9.48 | 21 | 3.66 |

Table 5
Basic Skills Post-Test
Grade 11

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 29.00 | 22 | 7.90 |
| Control | 22.43 | 21 | 7.82 |
| *Language Mechanics* | | | |
| Experimental | 13.77 | 22 | 2.43 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 14.41 | 22 | 4.54 |
| Control | 12.52 | 21 | 3.67 |
| *Mathematics Applications* | | | |
| Experimental | 10.50 | 22 | 5.36 |
| Control | 9.48 | 21 | 3.66 |

Table 6
Basic Skills Gain Scores
Grade 11

| | Mean | No. | S.D. | t | df | p |
|---|---|---|---|---|---|---|
| *Reading Comprehension* | | | | | | |
| Experimental | 1.82 | 22 | 3.23 | 0.42 | 30.30 | .68 |
| Control | 1.19 | 21 | 6.03 | | | |
| *Language Mechanics* | | | | | | |
| Experimental | 1.50 | 22 | 2.54 | | | |
| Control | - | - | - | | | |
| *Mathematics Concepts* | | | | | | |
| Experimental | -1.45 | 22 | 3.19 | 0.27 | 41 | .79 |
| Control | -1.19 | 21 | 3.12 | | | |
| *Mathematics Applications* | | | | | | |
| Experimental | 2.95 | 22 | 3.84 | 2.31 | 41 | .03 |
| Control | 0.10 | 21 | 4.28 | | | |

or control group status. The table indicates the mean gain for each group, the number of students in each group, the standard deviation, the t-value, degrees of freedom and associated probability level. As is shown in the table for, first, reading comprehension, there was no statistically significant difference in mean gain scores between the experimental and the control groups. Next, in mathematics concepts, there was again no statistically significant difference in mean gain scores between the experimental or control groups. Lastly, however, in mathematics applications, a statistically significant difference was discovered in the mean gain scores between the two groups. It was found that the experimental group had a mean gain of 2.95 in mathematics applications, while the control group had a mean gain of only 0.10. This difference in mean gain was significant at the .05 level. Thus, it was shown by this analysis of basic skill gain scores on eleventh graders that no statistically significant mean gain difference existed in any of the basic skill areas other than mathematics applications in which the experimental group did significantly better than the control group.

Table 7 indicates the basic skills pre-test scores for twelfth graders. Similar to the previously shown tables for both experimental and control groups, data is shown to reflect the mean score in number of subjects in each group and the standard deviation.

Table 7
Basic Skills Pre-Test
Grade 12

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 23.68 | 19 | 7.87 |
| Control | 26.45 | 11 | 8.45 |
| *Language Mechanics* | | | |
| Experimental | 12.58 | 19 | 3.24 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 13.16 | 19 | 5.06 |
| Control | 14.00 | 11 | 5.29 |
| *Mathematics Applications* | | | |
| Experimental | 10.47 | 19 | 5.29 |
| Control | 13.27 | 11 | 5.73 |

Table 8 presents this same information for the post-test scores, again for twelfth graders.

Table 9 indicates the basic skills gain scores for twelfth graders in each of the major basic skill areas. A review of this table indicates, for reading comprehension, no significant difference in mean gain scores between experimental and control subjects. In mathematical concepts, again, no significant difference was found between experimental and control group students. Finally, in mathematics applications, a significant difference in mean gain scores was found between the experimental and the control groups. A review of the table indicates that the experimental group had a mean gain of 2.11 units, while the control group had a mean gain score of -0.55 units. Thus, it was shown that this mean gain score difference was significant at the .05 level. From this table it was concluded that no significant difference in mean gain scores between experimental and control groups was found in basic skills, with the exception of mathematics applications, in which the experimental group gained a significantly greater amount than the control group.

Table 10 displays the basic skills pre-test data for males. Again, in reviewing this table, the experimental or control group data is shown for mean scores, number of subjects and standard deviation.

Table 8
Basic Skills Post-Test
Grade 12

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 26.42 | 19 | 6.51 |
| Control | 27.00 | 11 | 8.57 |
| *Language Mechanics* | | | |
| Experimental | 13.42 | 19 | 2.48 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 14.05 | 19 | 4.06 |
| Control | 14.45 | 11 | 5.50 |
| *Mathematics Applications* | | | |
| Experimental | 12.58 | 19 | 4.86 |
| Control | 12.73 | 11 | 5.57 |

Table 9
Basic Skills Gain Scores
Grade 12

| | Mean | No. | S.D. | t | df | p |
|---|---|---|---|---|---|---|
| *Reading Comprehension* | | | | | | |
| Experimental | 2.74 | 19 | 2.58 | 1.84 | 28 | .08 |
| Control | 0.55 | 11 | 3.96 | | | |
| *Language Mechanics* | | | | | | |
| Experimental | 0.84 | 19 | 2.63 | | | |
| Control | - | - | - | | | |
| *Mathematics Concepts* | | | | | | |
| Experimental | 0.89 | 19 | 2.77 | 0.47 | 28 | .64 |
| Control | 0.45 | 11 | 1.81 | | | |
| *Mathematics Applications* | | | | | | |
| Experimental | 2.11 | 19 | 2.85 | 2.70 | 28 | .01 |
| Control | -0.55 | 11 | 2.07 | | | |

Table 10
Basic Skills Pre-Test
Males

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 24.21 | 19 | 6.20 |
| Control | 25.29 | 14 | 9.67 |
| *Language Mechanics* | | | |
| Experimental | 11.32 | 19 | 3.87 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 14.42 | 19 | 4.14 |
| Control | 14.29 | 14 | 4.73 |
| *Mathematics Applications* | | | |
| Experimental | 10.79 | 19 | 4.88 |
| Control | 13.57 | 14 | 4.77 |

Table 11 indicates the basic skills post-test data for males, and again displays the mean scores, the number of subjects and standard deviations for both the experimental and the control groups.

Table 12 indicates the basic skills gain scores for males only. A review of the table indicates, in reading comprehension, there was no statistically significant difference in mean gain scores between the experimental and the control group. Likewise, there was no statistically significant difference in mean gain scores in mathematics concepts between the experimental and the control group. In mathematics applications, although the experimental group did show a much higher mean gain score than the control group, this difference was not quite statistically significant at the .05 level. Thus, it can be concluded that, for particularly males in the basic skills area, there were no statistically significant differences in mean gain scores between the experimental and the control groups.

Table 13 indicates the basic skills pre-test data for females only. A review of this table again indicates the mean number of subjects and standard deviation for scores in both the experimental and the control groups in each of the various areas on the basic skills test.

Table 14 similarly shows this same information for the basic skills post-test for females only.

Table 11
Basic Skills Post-Test
Males

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 25.89 | 19 | 7.33 |
| Control | 26.36 | 14 | 8.48 |
| *Language Mechanics* | | | |
| Experimental | 13.00 | 19 | 2.65 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 13.37 | 19 | 4.68 |
| Control | 14.14 | 14 | 5.41 |
| *Mathematics Applications* | | | |
| Experimental | 13.53 | 19 | 5.69 |
| Control | 13.64 | 14 | 6.18 |

Table 12
Basic Skills Gain Scores
Males

| | Mean | No. | S.D. | t | df | p |
|---|---|---|---|---|---|---|
| *Reading Comprehension* | | | | | | |
| Experimental | 1.68 | 19 | 3.51 | 0.39 | 31 | .70 |
| Control | 1.07 | 14 | 5.58 | | | |
| *Language Mechanics* | | | | | | |
| Experimental | 1.68 | 19 | 2.89 | | | |
| Control | - | - | - | | | |
| *Mathematics Concepts* | | | | | | |
| Experimental | -1.05 | 19 | 3.06 | -0.90 | 31 | .31 |
| Control | -0.14 | 14 | 2.54 | | | |
| *Mathematics Applications* | | | | | | |
| Experimental | 2.74 | 19 | 3.87 | 1.92 | 31 | .06 |
| Control | 0.07 | 14 | 4.03 | | | |

Table 13
Basic Skills Pre-Test
Females

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 26.73 | 22 | 8.52 |
| Control | 21.28 | 18 | 8.54 |
| *Language Mechanics* | | | |
| Experimental | 13.36 | 22 | 2.97 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 13.32 | 22 | 5.30 |
| Control | 12.06 | 18 | 3.72 |
| *Mathematics Applications* | | | |
| Experimental | 10.23 | 22 | 5.67 |
| Control | 8.61 | 18 | 3.52 |

Table 14
Basic Skills Post-Test
Females

| | Mean | Number | S.D. |
|---|---|---|---|
| *Reading Comprehension* | | | |
| Experimental | 29.45 | 22 | 7.05 |
| Control | 22.17 | 18 | 7.73 |
| *Language Mechanics* | | | |
| Experimental | 11.14 | 22 | 2.145 |
| Control | - | - | - |
| *Mathematics Concepts* | | | |
| Experimental | 13.55 | 22 | 4.18 |
| Control | 11.06 | 18 | 3.72 |
| *Mathematics Applications* | | | |
| Experimental | 10.23 | 22 | 5.67 |
| Control | 8.61 | 18 | 3.52 |

Table 15 indicates the basic skills gain scores for females only. In a review of this table it was found that, in reading comprehension, there was no statistically significant difference between experimental and control females in mean gain score. In mathematics concepts, again, no statistically significant difference in mean gain scores was found. Lastly, in mathematics applications, there was a statistically significant difference in mean gain scores between the experimental and the control female students. It was found that experimental group mean gain scores showed a value of 2.41 units, while control group individuals had a mean gain score of -0.28. Thus, at the .05 level, it was concluded that females in the experimental group gained significantly more than females in the control group in the area of mathematics applications. In all other areas of basic skills gain scores for females, no statistically significant differences were found.

Career Education Knowledge Test

An analysis of the career education gain scores on all cases was done and is summarized in Table 16. For both the experimental and control group each of the objectives quantitatively assessed are presented in order.

Objective I, Career Planning, shows a non-significant difference in mean gain scores between the experimental and the control groups.

Table 15
Basic Skills Gain Scores
Females

| | Mean | No. | S.D. | t | df | p |
|---|---|---|---|---|---|---|
| *Reading Comprehension* | | | | | | |
| Experimental | 2.73 | 22 | 2.33 | 1.36 | 22.32 | .19 |
| Control | 0.89 | 18 | 5.32 | | | |
| *Language Mechanics* | | | | | | |
| Experimental | 0.77 | 22 | 2.25 | | | |
| Control | - | - | - | | | |
| *Mathematics Concepts* | | | | | | |
| Experimental | 0.23 | 22 | 3.25 | 1.22 | 38 | .23 |
| Control | -1.00 | 18 | 3.05 | | | |
| *Mathematics Applications* | | | | | | |
| Experimental | 2.41 | 22 | 3.02 | 2.64 | 38 | .01 |
| Control | -0.28 | 18 | 3.43 | | | |

Table 16
Career Education Gain Scores
All Cases

| Objective Number Group | Mean | S.D. | N | t | df | p |
|---|---|---|---|---|---|---|
| *Objective I - Career Planning* | | | | | | |
| Experimental | 0.23 | 1.07 | 40 | -1.93 | 50.16 | .06 |
| Control | 0.91 | 1.79 | 33 | | | |
| *Objective II - Economic Factors* | | | | | | |
| Experimental | 1.40 | 2.00 | 40 | 2.63 | 71 | .01 |
| Control | 0.06 | 2.36 | 33 | | | |
| *Objective III - Career Interests* | | | | | | |
| Experimental | 0.88 | 1.67 | 40 | 1.42 | 71 | .16 |
| Control | 0.33 | 1.55 | 33 | | | |
| *Objective IV & V - Job Acquisition* | | | | | | |
| Experimental | 0.33 | 0.76 | 40 | 1.05 | 50.21 | .30 |
| Control | 0.06 | 1.27 | 33 | | | |
| *Objective VII - Education/Career* | | | | | | |
| Experimental | 1.15 | 1.35 | 40 | 2.35 | 71 | .02 |
| Control | 0.30 | 1.72 | 33 | | | |
| *Objective IX - Sex Discrimination* | | | | | | |
| Experimental | 1.20 | 1.24 | 40 | 2.89 | 71 | .01 |
| Control | 0.21 | 1.67 | 33 | | | |

Objective II, Economic Factors, illustrates a significant difference at the .05 level between experimental and control group subjects. The experimental group had a mean gain score of 1.40 units, while the control group had a mean gain score of only 0.06 units.

Objective III, Career Interests, on review indicates no statistically significant difference in mean gain scores between the experimental and the control groups.

Objectives IV and V, Job Acquisition, again shows no statistically significant difference in mean gain scores between experimental and control groups.

Objective VII, Education/Career, has a statistically significant difference at the .05 level between experimental and control group students. A further review indicated that the experimental group students had a mean gain of 1.15 units, while control group students had a mean gain of only 0.30 units.

Objective IX, Sex Discrimination, illustrates a statistically significant difference in mean gain scores between the experimental and the control groups. The experimental group displayed a mean gain score of 1.20 units, while the control group showed a mean gain score of 0.21 units.

In summary, it is then apparent from Table 16 that at the .05 level there were three significant differences in mean

gain scores, all in favor of the experimental group. Objective II, Economic Factors; Objective VII, Education/ Career; and Objective IX, Sex Discrimination—all showed experimental group mean gains being significantly higher than the mean gain from the control group.

Table 17 indicates the career education pre-test data for grade 11 students. As in earlier tables for pre-test or post-test data, the experimental and control groups are shown with their respective data for the mean, standard deviation, and number of subjects.

Table 18 indicates this same information on the career education post-test for eleventh graders.

Table 19 indicates the career education gain scores for eleventh graders only. An analysis of the objectives indicates some interesting results. For Objective 1, Career Planning, no statistically significant difference in mean gain scores was found between the experimental and the control group. For Objective II, Economic Factors, again no statistically significantly difference was found for eleventh graders on mean gain. For Objective III, Career Interests, again no statistically significance in mean gain scores was found between experimental and control groups. For Objective IV and V, Job Acquisition, no statisitically significant mean gain scores were found between experimental and control

Table 17
Career Education Pre-Test
Grade 11

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.82 | 1.33 | 22 |
| Control | 8.57 | 1.77 | 21 |
| *Objective II - Economic Factors* | | | |
| Experimental | 9.23 | 2.20 | 22 |
| Control | 8.86 | 2.67 | 21 |
| *Objective III - Career Interests* | | | |
| Experimental | 5.41 | 2.24 | 22 |
| Control | 5.81 | 1.75 | 21 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 6.14 | 1.04 | 22 |
| Control | 5.29 | 1.31 | 21 |
| *Objective VII - Education/Career* | | | |
| Experimental | 13.68 | 2.50 | 22 |
| Control | 13.81 | 2.46 | 21 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 3.95 | 1.50 | 22 |
| Control | 4.24 | 2.07 | 21 |

Table 18
Career Education Post-Test
Grade 11

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.95 | 1.33 | 22 |
| Control | 9.57 | 1.36 | 21 |
| *Objective II - Economic Factors* | | | |
| Experimental | 10.50 | 1.79 | 22 |
| Control | 9.10 | 2.61 | 21 |
| *Objective III - Career Interests* | | | |
| Experimental | 6.68 | 1.76 | 22 |
| Control | 6.29 | 1.49 | 21 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 6.23 | .81 | 22 |
| Control | 5.24 | 1.26 | 21 |
| *Objective VII - Education/Career* | | | |
| Experimental | 14.59 | 2.46 | 22 |
| Control | 14.14 | 2.31 | 21 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 5.00 | 1.48 | 22 |
| Control | 4.52 | 1.63 | 21 |

Table 19
Career Education Gain Scores
Grade 11

| Objective Number Group | Mean | S.D. | N | t | df | p |
|---|---|---|---|---|---|---|
| *Objective I - Career Planning* | | | | | | |
| Experimental | 0.14 | 0.89 | 22 | -1.90 | 28.08 | .07 |
| Control | 1.00 | 1.90 | 21 | | | |
| *Objective II - Economic Factors* | | | | | | |
| Experimental | 1.27 | 1.75 | 22 | 1.64 | 41 | .11 |
| Control | 0.24 | 2.36 | 21 | | | |
| *Objective III - Career Interests* | | | | | | |
| Experimental | 1.27 | 1.88 | 22 | 1.50 | 41 | .14 |
| Control | 0.48 | 1.57 | 21 | | | |
| *Objective IV & V - Job Acquisition* | | | | | | |
| Experimental | 0.09 | 0.61 | 22 | 0.44 | 27.86 | .67 |
| Control | -0.05 | 1.32 | 21 | | | |
| *Objective VII - Education/Career* | | | | | | |
| Experimental | 0.91 | 1.41 | 22 | 1.22 | 41 | .23 |
| Control | 0.33 | 1.68 | 21 | | | |
| *Objective IX - Sex Discrimination* | | | | | | |
| Experimental | 1.05 | 1.43 | 22 | 1.44 | 41 | .16 |
| Control | 0.29 | 2.00 | 21 | | | |

groups. Objective VII, Education/Career, further shows no statistically significant difference between the experimental and the control group in mean gain and, lastly, on Objective IX, Sex Discrimination, no statistically significant difference in mean gain scores between the experimental and the control group was found.

In summary for Table 19, it is apparent that no statistically significant mean gain differences were found between experimental and control groups for strictly eleventh graders.

Continuing the analysis now to only twelfth graders, the career education pre-test is evaluated in Table 20. As in the previous cases, the group, the mean, the standard deviation and the number of subjects for experimental and control groups is shown.

Table 21 depicts the career education post-test data for twelfth graders only.

Table 22 indicates the career education gain scores for grade 12 students. Again, looking at each sub-part of the career education test individually, it is found that initially, in career planning, there was no statistically significant difference in mean gain scores between the experimental and the control groups. In Objective II, Economic Factors, a statistically significant difference in mean gain scores was found at the .05 level between experimental and

Table 20
Career Education Pre-Test
Grade 12

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.11 | 1.53 | 18 |
| Control | 8.58 | 2.31 | 12 |
| *Objective II - Economic Factors* | | | |
| Experimental | 8.61 | 2.97 | 18 |
| Control | 8.58 | 2.23 | 12 |
| *Objective III - Career Interests* | | | |
| Experimental | 6.50 | 1.54 | 18 |
| Control | 5.75 | 2.05 | 12 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 5.00 | 1.50 | 18 |
| Control | 4.67 | 2.06 | 12 |
| *Objective VII - Education/Career* | | | |
| Experimental | 13.11 | 2.40 | 18 |
| Control | 12.17 | 4.75 | 12 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 4.17 | 1.04 | 18 |
| Control | 4.25 | 1.66 | 12 |

Table 21
Career Education Post-Test
Grade 12

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.44 | 1.89 | 18 |
| Control | 9.33 | 1.88 | 12 |
| *Objective II - Economic Factors* | | | |
| Experimental | 10.17 | 2.07 | 18 |
| Control | 8.33 | 4.01 | 12 |
| *Objective III - Career Interests* | | | |
| Experimental | 6.89 | 1.32 | 18 |
| Control | 5.83 | 2.33 | 12 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 5.61 | 1.04 | 18 |
| Control | 4.92 | 1.88 | 12 |
| *Objective VII - Education/Career* | | | |
| Experimental | 14.56 | 2.15 | 18 |
| Control | 12.42 | 4.40 | 12 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 5.56 | 1.04 | 18 |
| Control | 4.33 | 1.50 | 12 |

Table 22
Career Education Gain Scores
Grade 12

| Objective Number Group | Mean | S.D. | N | t | df | p |
|---|---|---|---|---|---|---|
| *Objective I - Career Planning* | | | | | | |
| Experimental | 0.33 | 1.28 | 18 | -0.78 | 28 | .45 |
| Control | 0.75 | 1.66 | 12 | | | |
| *Objective II - Economic Factors* | | | | | | |
| Experimental | 1.56 | 2.31 | 18 | 2.06 | 28 | .05 |
| Control | -0.25 | 2.42 | 12 | | | |
| *Objective III - Career Interests* | | | | | | |
| Experimental | 0.39 | 1.24 | 18 | 0.59 | 28 | .56 |
| Control | 0.08 | 1.56 | 12 | | | |
| *Objective IV & V - Job Acquisition* | | | | | | |
| Experimental | 0.61 | 0.85 | 18 | 0.96 | 28 | .35 |
| Control | 0.25 | 1.22 | 12 | | | |
| *Objective VII - Education/Career* | | | | | | |
| Experimental | 1.44 | 1.25 | 18 | 2.11 | 28 | .04 |
| Control | 0.25 | 1.87 | 12 | | | |
| *Objective IX - Sex Discrimination* | | | | | | |
| Experimental | 1.39 | 0.98 | 18 | 3.69 | 28 | .00 |
| Control | 0.08 | 0.90 | 12 | | | |

control group students. It was found that experimental students gained significantly greater than control group students. For Objective III, Career Interests, there was no statistically significant differences in mean gain scores between the experimental and the control groups. For Objective IV and V, Job Acquisition, there no statistically significantly difference in mean gain scores between the experimental and the control students. For Objective VII, Education/Career, a statistically significant difference at the .05 level was found between the experimental and control group students. It was found that the experimental group had significantly greater gains than the control group in this area. For Objective IX, Sex Discrimination, again a significant difference was found in mean gain scores between the experimental and the control groups with the experimental group showing significantly greater gain than the control group.

In summary for Table 22, it was found that in three areas of career education, the grade 12 experimental students do better than grade 12 control students. Those significant were shown in Objective II, Economic Factors; Objective VII, Education/Career; and Objective IX, Sex Discrimination.

At this point it is evident that significant mean gain scores showing experimental group mean gains to be higher than control mean gains are most prevalent for twelfth graders.

The career education pre-test scores for only males is shown in Table 23. This table indicates group mean scores, standard deviations, and number of males per group.

Table 24 indicates the same information for males only on the career education post-test.

Table 25 indicates the career education gain scores for males only. As in previous cases, the experimental or control group is shown with respective means, standard deviations, number per group, and related statistics. A review of Table 25 indicates that there were no statistically significant mean score differences between experimental and control group males.

Table 26 shows career education pre-test scores for females only. The table presents the group membership, the mean scores, standard deviations, and number of females in each of the two groups.

Table 27 indicates career education post-test scores, again for females only.

Table 28 depicts career education gain scores for females only. For Objective I, Career Planning, there was no statistically significant difference in mean gain scores between the experimental and the control group females. For Objective II, Economic Factors, a statistically significant difference at the .05 level was found between experimental

Table 23
Career Education Pre-Test
Males

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.44 | 1.50 | 18 |
| Control | 8.41 | 2.32 | 17 |
| *Objective II - Economic Factors* | | | |
| Experimental | 9.17 | 2.81 | 18 |
| Control | 8.94 | 2.93 | 17 |
| *Objective III - Career Interests* | | | |
| Experimental | 5.61 | 2.09 | 18 |
| Control | 5.65 | 2.12 | 17 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 5.39 | 1.50 | 18 |
| Control | 4.71 | 1.86 | 17 |
| *Objective VII - Education/Career* | | | |
| Experimental | 14.00 | 2.61 | 18 |
| Control | 12.29 | 3.97 | 17 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 4.00 | 1.28 | 18 |
| Control | 3.76 | 1.82 | 17 |

Table 24
Career Education Post-Test
Males

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.72 | 1.64 | 18 |
| Control | 9.41 | 1.70 | 17 |
| *Objective II - Economic Factors* | | | |
| Experimental | 10.50 | 1.85 | 18 |
| Control | 9.29 | 3.48 | 17 |
| *Objective III - Career Interests* | | | |
| Experimental | 6.44 | 1.95 | 18 |
| Control | 5.76 | 1.86 | 17 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 5.89 | .90 | 18 |
| Control | 5.18 | 1.70 | 17 |
| *Objective VII - Education/Career* | | | |
| Experimental | 14.72 | 2.32 | 18 |
| Control | 12.71 | 3.67 | 17 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 5.06 | 1.35 | 18 |
| Control | 4.18 | 1.78 | 17 |

Table 25
Career Education Gain Scores
Males

| Objective Number Group | Mean | S.D. | N | t | df | p |
|---|---|---|---|---|---|---|
| *Objective I - Career Planning* | | | | | | |
| Experimental | 0.28 | 1.02 | 18 | -1.32 | 23.26 | .20 |
| Control | 1.00 | 2.03 | 17 | | | |
| *Objective II - Economic Factors* | | | | | | |
| Experimental | 1.33 | 2.33 | 18 | 1.18 | 33 | .25 |
| Control | 0.35 | 2.60 | 17 | | | |
| *Objective III - Career Interests* | | | | | | |
| Experimental | 0.83 | 1.65 | 18 | 1.31 | 33 | .20 |
| Control | 0.12 | 1.58 | 17 | | | |
| *Objective IV & V - Job Acquisition* | | | | | | |
| Experimental | 0.50 | 0.86 | 18 | 0.08 | 33 | .94 |
| Control | 0.47 | 1.23 | 17 | | | |
| *Objective VII - Education/Career* | | | | | | |
| Experimental | 0.72 | 1.18 | 18 | 0.56 | 33 | .58 |
| Control | 0.41 | 2.03 | 17 | | | |
| *Objective IX - Sex Discrimination* | | | | | | |
| Experimental | 1.06 | 0.94 | 18 | 1.18 | 22.06 | .25 |
| Control | 0.41 | 2.06 | 17 | | | |

Table 26
Career Education Pre-Test
Females

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.55 | 1.44 | 22 |
| Control | 8.75 | 1.53 | 16 |
| *Objective II - Economic Factors* | | | |
| Experimental | 8.77 | 2.39 | 22 |
| Control | 8.56 | 1.99 | 16 |
| *Objective III - Career Interests* | | | |
| Experimental | 6.14 | 1.96 | 22 |
| Control | 5.95 | 1.53 | 16 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 5.82 | 1.26 | 22 |
| Control | 5.44 | 1.26 | 16 |
| *Objective VII - Education/Career* | | | |
| Experimental | 12.95 | 2.24 | 22 |
| Control | 14.19 | 2.69 | 16 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 4.09 | 1.34 | 22 |
| Control | 4.75 | 1.92 | 16 |

Table 27
Career Education Post-Test
Females

| Objective Number<br>Group | Mean | S.D. | No. |
|---|---|---|---|
| *Objective I - Career Planning* | | | |
| Experimental | 9.73 | 1.61 | 22 |
| Control | 9.56 | 1.41 | 16 |
| *Objective II - Economic Factors* | | | |
| Experimental | 10.23 | 1.97 | 22 |
| Control | 8.31 | 2.77 | 16 |
| *Objective III - Career Interests* | | | |
| Experimental | 7.05 | 1.13 | 22 |
| Control | 6.50 | 1.75 | 16 |
| *Objective IV & V - Job Acquisition* | | | |
| Experimental | 6.00 | 1.02 | 22 |
| Control | 5.06 | 1.29 | 16 |
| *Objective VII - Education/Career* | | | |
| Experimental | 14.45 | 2.32 | 22 |
| Control | 14.38 | 2.63 | 16 |
| *Objective IX - Sex Discrimination* | | | |
| Experimental | 5.41 | 1.30 | 22 |
| Control | 4.75 | 1.29 | 16 |

Table 28
Career Education Gain Scores
Females

| Objective Number Group | Mean | S.D. | N | t | df | p |
|---|---|---|---|---|---|---|
| *Objective I - Career Planning* | | | | | | |
| Experimental | 0.18 | 1.14 | 22 | -1.44 | 36 | .16 |
| Control | 0.81 | 1.56 | 16 | | | |
| *Objective II - Economic Factors* | | | | | | |
| Experimental | 1.45 | 1.74 | 22 | 2.73 | 36 | .01 |
| Control | -0.25 | 2.11 | 16 | | | |
| *Objective III - Career Interests* | | | | | | |
| Experimental | 0.91 | 1.72 | 22 | 0.64 | 36 | .53 |
| Control | 0.56 | 1.55 | 16 | | | |
| *Objective IV & V - Job Acquisition* | | | | | | |
| Experimental | 0.18 | 0.66 | 22 | 1.67 | 21.62 | .11 |
| Control | -0.38 | 1.20 | 16 | | | |
| *Objective VII - Education/Career* | | | | | | |
| Experimental | 1.50 | 1.41 | 22 | 2.87 | 36 | .01 |
| Control | 0.19 | 1.38 | 16 | | | |
| *Objective IX - Sex Discrimination* | | | | | | |
| Experimental | 1.32 | 1.46 | 22 | 2.99 | 36 | .01 |
| Control | 0.00 | 1.16 | 16 | | | |

and control group females. A closer review indicated that experimental group females scored significantly higher mean gains than did their control group counterparts. For Objective III, Career Interests, no statistically significantly difference in mean gain scores was found between experimental and control group females. Regarding Objective IV and V, Job Acquisition, no statistically significantly difference in mean gain scores between experimental and control groups was found. Reviewing Objective VII, Education/Career, a statistically significant difference at the .05 level was found between the experimental and the control group females. In this case, the experimental group females scored significantly greater mean gains than did the control group females. Lastly, for Objective IX, Sex Discrimination, the experimental group females again scored significantly higher than the control group females in terms of mean gains at the .05 significance level.

Thus, in summary for Table 28, it appears that career education gain scores showing significant improvement in experimental group over control group was much more prevalent for females than with males.

Reviewing Tables 1 through 28, in summary it is found that generally very little difference in basic skills was found between the subjects. When a difference was found it

was generally in the direction of a higher score for the experimental group. In no case is it apparent that experimental group students suffered in their basic skills. Regarding the career education gain scores, it is apparent that the greatest gain is in twelfth graders, and particularly females.

Table 29, the Competency Report Summary, indicates a total of 40 experimental group students. Of these, 48% were male and 52% were female. Also, 57% were in grade 11, while 43% were in grade 12. A total of 13 categories of competencies are shown in the table. The community certification indicates the frequency or number of competencies achieved at each of these categories of competency. Also, a 1-10 score, which represented the teacher's work evaluation for any given pupil, was shown. As an example, looking at Competency 1, Budgeting Time & Money, there were 39 community certifications and, from these the average teacher's work evaluation score on the 1-10 scale was 8.3. As a second example, Competency 2, Securing a Job, had 26 community certifications with an average teacher's work evaluation score of 8.9, a relatively high mark. In the lower portion of the table are frequency counts showing projects, explorations, and special placements. As is shown by the table, there were 87 projects, 83 explorations and 22 special placements. These are averaged by the 40 students to get the per student average of 2.18 for

Table 29
Competency Report Summary

Males-48%, Females-52% (n=40) Grade 11-57%, Grade 12-43%

| Competency | (n) Community Certification | 1-10 Score Teacher's Work(mean) Evaluation |
|---|---|---|
| 1. Budgeting Time & Money | 39 | 8.3 |
| 2. Securing a Job | 26 | 8.9 |
| 3. Insurance | 24 | 9.7 |
| 4. Housing | 20 | 9.8 |
| 5. Checking & Credit | 27 | 9.3 |
| 6. Taxes | 22 | 9.9 |
| 7. Physical Health & Education | 25 | 9.9 |
| 8. Auto Maintenance & Buying | 18 | 8.7 |
| 9. Future Education | 11 | 8.6 |
| 10. Emergency | 31 | 10.0 |
| 11. Cardiopulmonary Resuscitation | 31 | 9.1 |
| 12. Law | 31 | 9.1 |
| 13. Community Service & Local Govmt. | 3 | 7.7 |

Frequency Counts

| | Projects | Explorations | Special Placement |
|---|---|---|---|
| | 87 | 83 | 22 |
| Per Student Average | 2.18 | 2.08 | 0.55 |

projects, 2.08 for explorations, and 0.55 for special placements.

Comparative Analysis to
Year Two and Year Three Data

A review of the Year Two data indicated significant differences by pre-test and post-test t-test analysis. The Year Three statistical analysis is actually more accurate than the second year's analysis. In the third year analysis, gain scores were used to statistically test for differences between the post- and pre-test scores. In the second year's analysis, gain scores were not used and merely the pre- and post-test scores were tested for significance.

Reviewing the statistical findings for Year Two indicated that with regard to the *Career Education Skills Test*, significant differences were found for:

Objective I - Career Planning
Objectives IV & V - Job Acquisition

For Year Three significant gain scores were found for:

Objective I - Career Planning
Objective II - Economic Factors
Objective VII - Education/Career
Objective IX - Sex Discrimination

Thus, it is apparent that the third year's evaluation indicates more significant gains than did the second year. Of course, a direct comparison is difficult since time frames were different and statistical procedures were not identical.

In summary, however, it can be stated that the Year Three evaluation demonstrates substantially more significant differences in the direction of positive gain than did the evaluation of Year Two.

Regarding the *Basic Skills Test*, results from the third year's evaluation were very similar to results from the second year's evaluation. It can be concluded that there were no serious differences in basic skill levels between the experimental and control groups at the pre-test stage. Of additional interest, from the Year Three evaluation, however, is the finding that in mathematics applications the experimental group gained significantly more than did the control group. This is shown statistically in Table 3.

In summary, the comparative analysis between Year Two and Year Three data indicates a somewhat stable program. As was found in both year's studies, the *Career Education Skills Test* demonstrates significant gains in certain areas for the experimental group, while in basic skills there is virtually no difference between groups at the start of the project. Additionally regarding basic skills, a significant gain was found for the experimental group in the mathematics applications segment.

Future Study

Although the formal project has ended for evaluation

purposes, data is still being collected within the career education program. No formal use of the data is planned, but it is still being collected at the pre-test stage. The data is being collected in the format which matches the data collected for the second year career education study.

Parent's Attitudinal Data

An evaluation of the Parent Opinion Survey was accomplished. Twenty parents filled out the Parent Opinion Survey and returned it by mail to the Wayne-Westland Career Education Program. The survey instrument (a copy of which is found in the appendix) contained a series of attitudinal questions, some of which were scaled and some of which asked for categorical responses.

Table 30 indicates the response pattern found in this Parent Opinion Survey. As is shown by the results, the program appears to have very positive impressions on the parent population. In the first segment of the questionnaire it was shown that parent attitudes centered around the 4.3 to 4.6 range out of a possible 5.0 scale, thus indicating pi agreement or positive attitude with the various questions asked.

Concerning weaknesses of the program, most parents thought there were very few. However, the major weakness was cited as "some students can't handle the freedom." This was recognized by approximately 25% of the parents sampled.

Table 30
$(CE)_2$ Program—Parent Opinion Survey
N=32

Directions: Most of the questions are to be answered on a scale of numbers from 1 to 5. Read the phrase above and below the numbers so you know what the scale means, then read each question and circle the number which is closest to your opinion. There are no right or wrong answers; your thoughts and feelings are the important things in this survey. The answers parents give will help determine how well the program is doing now and improve it in the future. Remember to circle a number for each item.

| | | | | | | Mean |
|---|---|---|---|---|---|---|
| 1. | How well do you feel the (CE)2 Program compares overall with the past school experiences of your daughter or son? | Much Worse 1 | 2 | 3 | 4 | (4.37) | Much Better 5 |
| 2. | If you had it to do over again, would you want your son or daughter to participate in the (CE)2 Program? | Definitely No 1 | 2 | 3 | 4 | (4.35) | Definitely Yes 5 |
| 3. | How well do you think your son or daughter likes the (CE)2 Program compared with past school experiences? | Much Worse 1 | 2 | 3 | 4 | (4.63) | Much Better 5 |
| 4. | Have you received enough information about your son or daughter's progress in the (CE)2 Program either by phone, in person, or by mail? | Definitely No 1 | 2 | 3 | 4 | (4.50) | Definitely Yes 5 |

Table 30
(Continued)

Mean

5. In comparison with regular classes how much opportunity did the Program provide your daughter or son for learning about occupations?

| Much Less | | About the Same | | | Much More |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | (4.63) | 5 |

6. In comparison with regular classes how much opportunity did the Program provide your daughter or son for general learning (i.e., basic skills and life skills)?

| Much Less | | About the Same | | | Much More |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | (4.32) | 5 |

7. In comparison with past experiences in regular classes how motivated is your daughter or son to learn in the (CE)2 Program?

| Much Less | | About the Same | | | Much More |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | (4.53) | 5 |

8. Before entering the Program, how often did your son or daughter talk to you about what was going on in regular classes?

| Almost Never | | | | | Almost Daily |
|---|---|---|---|---|---|
| 1 | 2 | (2.95) | 3 | 4 | 5 |

9. How often does your son or daughter talk to you about what's going on in the (CE)2 Program?

| Almost Never | | | | | Almost Daily |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | (4.36) | 5 |

10. What do you think are the greatest <u>weaknesses</u> of the (CE)2 Program? (Check any of the following which are applicable.)

<u>25%</u> 1. Some students can't handle the freedom.
<u>10%</u> 2. Problems in the organization of the program.

Table 30
(Continued)

15% 3. Students not receiving sufficient training.
15% 4. Inadequate supervision of students on job sites.
15% 5. Other (please write in) _____

11. What do you think are the greatest strengths of the (CE)2 Program? (Check any of the following which are applicable.)

70% 1. Good alternative to a regular school program.
60% 2. Quality of the staff.
70% 3. Students learn about a variety of careers.
85% 4. Students learn about "real life" situations.
55% 5. Good way of getting students to learn.
85% 6. Experience in working with adults.
20% 7. Other (please write in) _____

12. What positive changes, if any, have you noticed in your son or daughter that might be a result of participation in the (CE)2 Program? (Check one or more.)

65% 1. Greater maturity or self-direction.
60% 2. Better able to relate to others.
75% 3. Greater self-confidence.
60% 4. Clearer direction about his/her future.
45% 5. More interested in education.
55% 6. Better understanding of jobs.
30% 7. Improvement in basic skills.
5% 8. None.
5% 9. Other (please write in) _____

13. What types of knowledge, skills or attitudes have your son or daughter acquired in the (CE)2 Program that you feel he or she would have not gotten from a regular high school program?

65% 1. First-hand knowledge of demands in a "real world" situation.
60% 2. Working with other people.
65% 3. On-the-job skills.
55% 4. Self-discipline.
55% 5. Motivation to learn
5% 6. Nothing.
- 7. Other (please write in) _____

14. Comments: _____

_____

Strengths of the program were predominately shown to be "students learn about real-life situations" and "experience in working with adults."

Concerning positive changes, if any, they had noticed in their son or daughter, most parents had responded to "greater self-confidence" found in their offspring. Secondly to this question, "greater maturity or self-direction," was named.

Frequency percentages showing the detail to each question may be found on Table 30.

Employer Attitudinal Data

In a survey of 32 employers, various attitudes toward a career education program were assessed. It was found by this attitudinal survey that 81% of the employers responding became involved with the program through the program personnel at the Wayne-Westland schools. Ninety-four percent of the employers responded that the program staff did provide them with enough information to direct student activities to their site. Additionally, 90% of the employers responding did say they would recommend to a potential employer or resource person that they become involved with this particular career education program. (See Table 31)

Concerning the scaled attitudinal questions, very positive attitudes were displayed by the employers. In

Table 31
$(CE)_2$ Program—Employer Opinion Survey
N=32

1. How did you become involved with the program? Check appropriate response(s).

| | | |
|---|---|---|
| 81% | 1. | Program personnel contacted me about the program. |
| 13% | 2. | A student talked to me about the program. |
| - | 3. | Another employer talked to me about the program. |
| 3% | 4. | Company personnel talked to me about the program. |
| - | 5. | Other (please write in) _____ |

2. Did the program staff provide you with enough information to help you direct student activities at your site?

| | | | |
|---|---|---|---|
| 94% | 1. | Yes | COMMENTS: _____ |
| 6% | 2. | No | _____ |

3. Would you recommend to a potential employer or resource person that he/she also become involved with the program?

| | | | |
|---|---|---|---|
| 94% | 1. | Yes | COMMENTS: _____ |
| 6% | 2. | No | _____ |

4. In general, do you think the (CE)2 students you have worked with are really interested in your site? Circle the appropriate number from 1 (definitely no) to 5 (definitely yes).

| Definitely No | | | Mean | Definitely Yes |
|---|---|---|---|---|
| 1 | 2 | 3 | (4.03) | 5 |

5. In general, do you think the students you have worked with are really interested in the program?

| Definitely No | | | | Definitely Yes |
|---|---|---|---|---|
| 1 | 2 | 3 | (4.45) | 5 |

6. How have employees at your site reacted to participation with the program? Check one.

| | | |
|---|---|---|
| 100% | 1. | Positive Reaction |
| - | 2. | Negative Reaction |
| - | 3. | Mixed Reaction |
| - | 4. | No Reaction |
| - | 5. | Not Applicable |
| - | 6. | Don't Know |

Table 31
(Continued)

7. In what ways (if any) have the employees at your site benefited? Check one or more appropriate responses.

| | | |
|---|---|---|
| 13% | 1. | They haven't benefited. |
| 44% | 2. | Increased their awareness of youth. |
| 9% | 3. | Motivated the regular employees to further training. |
| 19% | 4. | Reduced their workload. |
| 22% | 5. | Increased interest in their own work. |
| 6% | 6. | I don't know. |
| 13% | 7. | Other (please write in) _____ |

8. Do you plan to continue participating with the program next year?

| | | |
|---|---|---|
| 88% | 1. | Yes COMMENTS: _____ |
| 3% | 2. | No _____ |
| 9% | | (No Answer) |

Why? (Check one or more reasons below.)

| | | |
|---|---|---|
| 84% | 1. | Program is worthwhile. |
| 44% | 2. | I like the people involved. |
| 59% | 3. | My participation is a community service. |
| 22% | 4. | It is challenging to me. |
| - | 5. | I have had problems with the staff. |
| 3% | 6. | I have had problems with the students. |
| 3% | 7. | The program is not effective. |
| 3% | 8. | I don't have time. |
| 3% | 9. | Other (please write in) _____ |

9. What do you think are the greatest strengths of the program? (Check one or more.)

| | | |
|---|---|---|
| 28% | 1. | Good alternative to a regular high school. |
| 38% | 2. | Quality of the staff. |
| 78% | 3. | Students learn about a variety of careers. |
| 78% | 4. | Students learn about real life situations. |
| 34% | 5. | Good way of getting students to learn. |
| 56% | 6. | Experience in working with adults |
| - | 7. | Other (please write in) _____ |

10. What do you think are the greatest weaknesses of the program? (Check one or more.)

| | | |
|---|---|---|
| 41% | 1. | Some students can't handle the freedom. |
| 9% | 2. | Problems in the organization of the program. |

Table 31
(Continued)

| | | |
|---|---|---|
| 16% | 3. | Students not receiving sufficient training. |
| 6% | 4. | Inadequate supervision of students on job sites. |
| 9% | 5. | Too much paperwork |
| 9% | 6. | Other (please write in) _____ |

ADDITIONAL COMMENTS:

reacting to the question, "how have employees at your site reacted to participation with the program," employers gave a resounding positive response, with 100% answering "positive reaction." Concerning how employees at the site benefited by the student participation at their workplace, employers indicated that a major factor was their increased awareness of youth. Secondly, they noticed that employees at their sites had increased interest in their own work. When asked if they intended to continue to participate in the program next year, 88% of the employers said yes, while only 3% said no. The remaining 9% did not answer the question. When asked why they would or would not continue participating in the program, 84% of the employers believed that the program was worthwhile. Nearly 60% felt their participation in the program was a community service. Only about 3% felt the program was not effective or that they did not have time.

When asked about the greatest strengths of the program 78% of the employers said, "students learn about a variety of careers." Also, 78% of the employers said, "students learn about real-life situations."

For weaknesses, 40% of the employers felt that "some students can't handle the freedom." Only 9% felt there was too much paperwork in the program, while 6% felt there was inadequate supervision of students on job sites.

In summary, the Employer Opinion Survey indicates a very positive attitude on the part of employers toward the program and its effectiveness. It is apparent that the employer gets great benefit out of the service, as do the students.

Conclusions

It is apparent from an evaluation of the basic skills data, the career skills data and the attitudinal instruments, that the program is having a positive impact, both on the students and on the community.

Over the two years of evaluation, the statistical analysis demonstrates conclusively that the program is, in fact, successful in providing better career knowledge gains in students while not hindering their basic skills development. Based quite objectively on the cognitive and attitudinal data analyzed over the past two years, it is safe to say that the program is totally successful and should be continued.

Of more specific interest within the data, particularly from the second year's evaluation, it was found that females in the twelfth grade tended to gain the most out of the program in terms of career education knowledge. This is a rather interesting sidelight to the evaluation. It is apparent that the more matured twelfth grade females, for some reason, are able to extract more from the program. This

point was also supported by the project staff in a more subjective analysis. The exact reason for this occurrence is uncertain, but nonetheless it does serve as an interesting sidelight to the research.

Lastly, the project staff must be commended for doing an excellent job in administering the program over the last two years. Never in this evaluator's experience has a more competent group of people run such a program. Perhaps a certain percentage of the success of the program can be attributed to these administrators. Certainly, without their expertise and sincere interest in the program, such large gains could not have been made.

# APPENDICES

# APPENDIX A

## INSTRUMENTS USED

Tests 2 and 3 were removed from this appendix because of copyright.

CAREER EDUCATION
SKILLS TEST

DIRECTIONS FOR MARKING YOUR ANSWERS

GENERAL DIRECTIONS

* Use a pencil to mark your answer sheet. DO NOT use a ballpoint pen.
* If you change your answer, ERASE your first answer completely.
* Each of your marks on your answer sheet should be DARK and should COMPLETELY fill the space for marking.

KINDS OF QUESTIONS

I. The questions in this booklet are followed by a set of answers from which you should choose only ONE answer. Read each of these questions carefully and choose the answer you think is MOST correct. ON YOUR ANSWER SHEET darken the letter that matches the answer you choose.

Read the sample questions below.

SAMPLE A: In your Test Booklet one item would look like this:

1. Which city is the capital of the United States?

(A) New York City
(B) Philadelphia
(C) Washington, D.C.
(D) Arlington

(C) is the correct answer.

SAMPLE B:

2. Which of the following is the BEST reason for obeying traffic rules?

(A) You are told you must.
(B) Your friends obey the rules.
(C) You will be called a good citizen.
(D) Your own safety is important.

(D) is the correct answer.

SAMPLE C:

3. Susan wanted to be dressed just right for an important date. Of the following persons, who would be the LEAST likely to help Susan pick the right thing to wear?

(A) A friend
(B) A stranger
(C) Her Father
(D) Her boyfriend

(B) is the correct answer

1. Which ONE of the following is the BEST reason why people need to be satisfied with their jobs?

   (A) They get along with other people on a job.
   (B) They are happier.
   (C) They must try hard to better themselves.
   (D) They earn more money.

2. Grace wants a job where she DOES NOT have to deal with many strangers. Which career do you feel would BEST match Grace's goal?

   (A) nurse
   (B) bookkeeper
   (C) public librarian
   (D) salesperson

3. As a result of Grace's matching her personal goal to her career choice, she will probably

   (A) be happier in her job.
   (B) have more free time.
   (C) make more new friends.
   (D) work for a large company.

4. Which ONE of the following is the MOST important factor in making a job personally satisfying for most people?

   (A) having a clean, well-lighted room in which to work
   (B) having a long lunch break
   (C) having a chance to work at a job one likes
   (D) having a lot of work to do all the time

5. Joe wants to be his own boss and run his own business. Which of the following careers BEST matches his personal goals?

   (A) military service
   (B) agriculture
   (C) public school teaching
   (D) government service

6. As a result of matching his personal goals and his career choice, Joe is MOST likely to

   (A) make more money.
   (B) obtain more education.
   (C) have greater job satisfaction.
   (D) explore new career directions.

7. Jessica Alden buys her clothes in Paris. She vacations on the Riviera and in Acapulco. She uses her private plane to visit her friends all around the world.

Which ONE of the factors below MOST influences Jessica's lifestyle?

(A) income
(B) culture
(C) education
(D) career

8. Paul Robinson and his family live on their farm. Like other families in their community, religion is very important to their lives. Women do not wear make-up; no one in the community smokes. Families in the community are very close and help each other.

Which ONE of the factors below MOST influences Paul's lifestyle or way of life?

(A) income
(B) culture
(C) formal education
(D) career

9. So he could enjoy the beauties of nature, Ray Vargas gave up his successful advertising business to move to the country. He now has the time he desires for his hobbies of wood carving and painting.

Which ONE of the factors below MOST influences Ray's lifestyle?

(A) education
(B) income
(C) personal value system
(D) career

10. Andrew Haynes works day and night in his laboratory. He forgets appointments and lets bills and letters stack up unopened.

Which ONE of the factors below MOST influences Andrew's lifestyle?

(A) income
(B) culture
(C) personal value system
(D) age

11. David Perez and Jess Robinson are both applying for a job in the accounting department at a large plant. They seem to be equally smart and have had the same amount of training. David's goal in life is to do accounting work, but Jess would have preferred a job in sports if any had been open. It would be more of an advantage to the plant to hire David instead of Jess.

What is the BEST reason for hiring David instead of Jess?

(A) David would probably be a better employee because he is more interested in his work.
(B) David should be better prepared for the job.
(C) Jess might not be satisfied with the amount of money he would make and would quit after a short while.

12. Joe Gonzalez wants a job at the Alice Printing Company. Here are some facts about Joe. His middle name is Antonio. His address is 444 Josephine Street. His telephone number is 664-2345. His emergency telephone number is 664-4004. His Social Security number is 465-39-5105.

Below are three application forms which he might have completed. Only ONE has been completed correctly. Darken the letter that indicates which form has been filled in correctly.

(A) Print Your Name Joe (First) Antonio (Middle) Gonzalez (Last)

Street Address 444 Josephine Street

Telephone Number 2345 Emergency Tel. No. 664-4004

Social Security Number 465-39-5105

(B) Print Your Name Gonzales (First) Joe (Middle) Antonio (Last)

Street Address 444 Josephine Street, Alice, Texas 78332

Telephone Number 664-2345 Emergency Tel. No. 664-4004

Social Security Number 465-39-5105

(C) Print Your Name Joe (First) Antonio (Middle) Gonzalez (Last)

Street Address 444 Josephine Street

Telephone Number 664-2345 Emergeney Tel. No. 664-4004

Social Security Number 465-39-5105

13. When you are filling out a job application blank, you should write "n/a"

(A) in blanks for questions to which you do not know the answer.
(B) in blanks for questions which do not apply to you.
(C) in none of the blanks on the form.
(D) in any blanks marked "Do not write in this space."

14. Leo was applying for a writing job with LMA Chemical Company. He arrived early wearing a suit and filled out the application. During the interview Leo asked various questions about the job. In response to one of his questions, he was told that his main task, writing ads for new products, would be done during regular office hours. Leo asked how much secretarial help he would have. He was assured that he would have plenty. Leo eagerly presented some examples of his earlier work. The examples were neatly displayed and very creative. The personnel manager praised his work and was impressed with his enthusiasm. They agreed on a salary and Leo was hired for the job.

Select the ONE skill that Leo displayed which was probably the MOST important in getting this job.

(A) arriving on time
(B) asking good questions
(C) presenting examples of his work
(D) dressing in a suit

15. Which situation of the three described below is the POOREST example of interview behavior? Choose only one.

(A) Barb arrives for her interview. The personnel man begins by explaining the job requirements. Barb suddenly realizes that she is not well enough trained for the job and tells the interviewer this.
(B) As Jack sits talking with Mr. Smith, he rests his muddy shoes against the side of Mr. Smith's desk. When Jack leaves, Mr. Smith has to clean up around the area where Jack was sitting.
(C) After being interviewed briefly, Chad tells the office manager that he cannot work for the salary that the company is willing to pay.

16. Which ONE of the following situations indicates personal job success?

(A) You work for a company that has signed a new labor contract and has given all employees an eight percent raise.

(B) You are asked to work overtime on Friday afternoons for the next two months.

(C) You are asked for your advice on changing employee work routines.

(D) You are asked to proofread your letters before they are mailed out.

17. Helen Marcus works on the assembly line in a radio factory. She has been late for work at least twice a week since she started work. This causes everyone else to have to wait until she arrives in order to begin work. She often makes careless mistakes. The area forman has told Helen that she needs to improve her behavior on the job or run the risk of being fired.

Helen needs to try to become more -

(A) tactful and confident.
(B) neat and friendly.
(C) loyal and creative.
(D) punctual and accurate.

18. Phil Rose, a traveling salesman, had just lost another sale. Phil told the customer he would be in town on April 28th, but he did not show up until April 30th. When he finally arrived, he expected the customer to see him right away, but was told that he would have to make an appointment. At that point, Phil complained that he could not wait because he was already late. The customer then told Phil to forget the order and leave.

How should Phil change in order to increase his success on the job?

(A) become more dependable
(B) become more loyal to the company
(C) become more accurate with numbers
(D) become more confident in his abilities

19. Choose the BEST meaning for the word "technology."

(A) substitutes mechanical labor for all human labor
(B) new knowledge and/or applied scientific knowledge
(C) always uses a lot of machinery

20. Which ONE of the following would be an example of new technology?

(A) the discovery of more oil
(B) the building of new cars
(C) the production of cars which do not use gasoline for fuel

21. Three of the statements below describe how technology has changed our lifestyle since 1900. Select the statement which DOES NOT represent such a change.

(A) People are now able to learn news of the world more quickly.
(B) The number of recreational products has decreased significantly.
(C) People move and change their jobs more often.
(D) People have more time for pleasure and learning.

22. Lynn Rickert works in the patching department of the Classic Carpet Company. Lynn has often worked as many as forty-eight hours per week and has had very little time to spend with friends. Recently the company's new equipment reduced job time. Now Lynn works only thirty-two hours per week.

How will Lynn's lifestyle probably be affected by this use of a technological improvement?

(A) Lynn will have more fringe benefits.
(B) Lynn will have a longer paid vacation.
(C) Lynn will feel her job is more important.
(D) Lynn will have more leisure time.

23. Which ONE of the following statements describes a situation where a job was discontinued due to improved technology and caused workers to need retraining?

(A) Workers were laid off when sales dropped.
(B) Sandy Clark left her summer job in the Clark Dairy to return to college.
(C) The nurses received the new equipment they had ordered.
(D) Buddy Hays went to night school after losing his job as a seam stitcher when the last company making shoes by hand changed to machine stitching.

24. With new machines and computers changing routine jobs, some assembly line and office workers may be fearful of -

(A) overproduction of goods.
(B) losing their jobs.
(C) an increase in the cost of goods.
(D) longer working hours.

25. The Reserve Chemical Company recently added a computer to its bookkeeping department in order to summarize sales and trends very rapidly.

Which ONE of the following statements BEST describes how this change would likely affect employees of Reserve Chemical?

(A) Extra bookkeepers would be hired.
(B) Some employees in the department would be retrained and some replaced by people with computer training.
(C) There would be more bookkeeping done by hand.
(D) Personnel in other departments would not be affected by the change in the bookkeeping department.

26. In the past, in order to have many copies of the same report, each original had to be typed separately. Later, copying machines were invented. After learning how to operate the new machines, secretaries could make as many copies as needed. Now a secretary can type one copy, set a machine, and the machine types as many originals as needed.

Which ONE of the following BEST describes the example given above?

(A) Secretaries are retraining to learn how to operate new machines.
(B) Secretaries are adapting to unfavorable conditions.
(C) Secretaries are being promoted to office managers.
(D) Secretaries are developing the physical ability to type faster.

27. In former times, individuals and families were able to provide for a large part of their needs by the work of their own hands. Today, people must depend on others to supply many of their needs, such as food, clothing, shelter, and medicine.

Three of the following statements describe conditions resulting from dependence on others. Select ONE statement that DOES NOT.

(A) A person does not need to have as many different skills as before in order to live.

(B) Cooperation among people is more necessary than ever before.
(C) More people than ever before are completely independent.
(D) People have more opportunity than ever before to become very good at one skill.

28. In our society today, many products are the results of the work of many people, each individual doing only a small part of the work. This division of labor results in

(A) workers having to work longer hours.
(B) fewer but better made products.
(C) workers having to depend more on each other.
(D) eachworker having to do many different jobs.

29. Specialization and division of labor result in

(A) more interdependence among people.
(B) less interdependence among people.
(C) the same amount of interdependence among people.
(D) no interdependence among people.

30. Division of labor in making shoes today means that several individuals divide the necessary tasks in order to manufacture shoes.

Which ONE of these statements shows a RESULT OF this division of labor?

(A) The individuals doing separate tasks will not get along.
(B) The shoes can be sold at lower prices than if one person did all the tasks involved in making a shoe.
(C) No one individual can be blamed if the shoe falls apart.
(D) The shoes are likely to cost more because so many individuals are involved in the work.

31. In which of the following situations is the GREATEST amount of interdependence necessary for survival?

(A) modern cities
(B) modern farms
(C) colonial farms
(D) colonial towns.

32. One result of the trend toward a highly specialized labor force is that

(A) factory workers have no pride in their work.
(B) factory workers seldom work on more than a small part of the product.
(C) more workers are needed to produce fewer goods.
(D) factory workers are less dependent on each other.

33. A group of similar courses is sometimes called a program of study. Which ONE of the following programs would probably be MOST helpful if you wanted a career in construction?

(A) general science
(B) vocational office education
(C) industrial arts
(D) physical education

34. Which ONE of the following courses would probably be MOST helpful to you if you wished to go into secretarial work after graduating from high school?

(A) computer programming
(B) American literature
(C) typing
(D) accounting

35. Select the program which would be the MOST helpful in assisting someone to get a job immediately after high school graduation.

(A) advanced science
(B) advanced art
(C) business education
(D) physical education.

36. Which ONE of the following courses would probably be MOST helpful to you if you wished to be a bank clerk after graduating from high school?

(A) chemistry
(B) bookkeeping
(C) home economics
(D) American literature

37. Which ONE of the following courses would probably be MOST helpful to you if you wished to go into farming after graduating from high school?

(A) general science
(B) industrial arts
(C) vocational agriculture
(D) geography

38. If your career goal is to become a builder and developer of homes, which of the following IS NOT a reason why you need geometry?

(A) to determine the square footage of the homes
(B) to calculate the pitch of the roof
(C) to draw or read the blue prints of the homes
(D) to figure the payroll of your employees

39. To be a legal secretary, one need NOT be able to.

(A) answer the phone courteously.
(B) understand some legal terms.
(C) recognize the usage of good English grammar.
(D) defend sections of a legal document.

40. Which ONE of the following school learning experiences would MOST improve an individual's ability to pursue a career in advertising?

(A) creative writing
(B) general math
(C) typing
(D) history

41. Jayne would like to become a professional actress. Which of the learning experiences below will require Jayne to make changes in her behavior in order to become a successful actress?

(A) She forgot her lines in a school play frequently.
(B) She was never late for rehearsals.
(C) She enjoyed helping the other actors with their make-up.
(D) She met the foreign language requirements.

42. Matt has always looked forward to becoming a professional baseball player. Which of the statements below describe a school experience that would be the LEAST likely to affect Matt's career decision?

(A) He played thirteen of the fifteen games this season.
(B) He wrote a research paper on the history of baseball.
(C) He placed in three out of four golf tournaments.
(D) He participated on the prom decoration committee.

43. John assisted the physics teacher in the school's electronics laboratory for two years during high school. John has obtained a degree in electrical engineering and now operates an experimental laboratory for a research company. Which statement BEST describes John's high school experiences?

(A) had no effect on his career choice.
(B) gave him the opportunity to explore his interests in electronics
(C) encouraged him to change his career in the field of physics.

44. Janice Lane received a grant to work in a medical laboratory the summer after she got out of high school. In addition to a scholarship, she received an expense-paid trip to Dallas to attend a meeting of the American Cancer Society, where outstanding scientists reported on their recent work. Which ONE is the MOST LIKELY reason that Janice was sent to the meeting?

(A) to stimulate her interest in cancer research
(B) so she would know who in Texas was working on cancer research
(C) to show her that her ideas are just as good as anyone else's.

45. Reading the editorial sections of newspapers will give you

(A) individuals' views on various issues
(B) factual information only
(C) the best information available on various issues.

46. Charles Morgan is a student teacher. Every day after his classes he and the teacher discuss his performance. Which of the following is the BEST reason for him to listen to the teacher's comments concerning his work:

(A) He could learn better ways of getting certain points across to the students.
(B) He needs to learn the students' names.
(C) The teacher will always want to point out his errors.
(D) The teacher doesn't have time to talk to him during the day.

47. Gary has just started to work as a mechanic in a motorcycle repair shop. Which statement IS NOT a good reason for Gary to ask questions on his new job?

(A) If Gary asks questions, he will learn more about motorcycles.
(B) Asking questions may keep Gary from making mistakes.
(C) If Gary asks questions, his boss will think that he does not know enough about his job.
(D) Gary will be able to do his work better if he asks for advice when he has a problem that he cannot solve.

48. Which is the BEST reason for students to ask questions in class?

(A) to show teachers that they are paying attention
(B) to gain information that they feel they need
(C) to make them appear smarter than the other students
(D) to keep the teacher from moving on to a topic in which the class is not interested

49. Larry Farrell has a part-time job mixing chemicals in a photography laboratory. He is getting ready to mix a new film developer, but he thinks that there is a mistake in the directions on the package.

Which statement below is the BEST reason Larry should ask questions?

(A) Larry will get a reward from the chemical company.
(B) Larry will be able to speed up the development process.
(C) If the developer is mixed incorrectly, Larry may ruin the film that he is supposed to develop.
(D) Larry will get an extra break from his work, while the boss checks the directions.

50. Graduation is coming. You have no idea of what you want to do when you leave school. Which of the actions listed below would be the LEAST helpful thing for you to do?

(A) talk with the school counselor
(B) write to universities, community colleges and trade schools to learn about opportunities
(C) find out what your best friend is going to do
(D) get information and advice from the local employment service.

51. You want to be an auto mechanic, but you lack the training. Which of the actions listed below would be the LEAST helpful thing for you to do?

(A) go to vocational school in an auto repair program
(B) go to work in an auto parts store
(C) become an apprentice in a garage which repairs cars
(D) enlist in the armed forces in a vehicle mechanics program

52. Elaine is interested in becoming a legal secretary. She has read about this career and has seen legal secretaries on TV shows. This seems to her to be a job she would enjoy. However, Elaine feels that this career requires someone who can meet people easily and who can speak well in conversations with important people. Her problem is that she is shy. Which of the actions listed below would be the BEST thing for her to do?

(A) participate in clubs or other groups to develop skills of meeting and speaking to people
(B) work in a small office that doesn't have many clients
(C) become more skilled in her typing and learn more about law
(D) give up the idea of becoming a legal secretary

53. Which statement is true about deciding on a career?

(A) A person who does well in school should only consider careers that require a college education.
(B) A person should decide alone what career to choose, and not seek advice from other people.
(C) A person should examine his/her abilities before deciding on a career
(D) The money that can be earned in a career is the most important factor to consider.

54. Ann is taking night courses to become a registered nurse. Untill she passes the license exam, she will continue to work as a nurse's aide. Which of the factors listed is PRESENTLY having the greatest influence on Ann's career choice?

(A) sex discrimination
(B) lack of confidence
(C) her parents' attitude
(D) training requirements

55. Sally wants to be a forest ranger, but she has been told that there are very few openings in that particular career. Which of the actions listed below would be the BEST thing for her to do?

(A) Do not consider how many openings there are if she has already made up her mind.
(B) Switch to a dirrerent career area that is less interesting to her but has more job opportunities.
(C) Postpone making a career choice until after she finishes training.
(D) Seek a career which is related to her chosen career goal but in which there are more job opportunities.

56. Pierre is rather shy and and stays mostly by himself rather than talking with others or entering into games and sports on the playground. He goes home right after school and either reads science fiction or builds model airplanes. In class, he almost never raises his hand to answer questions, but he is one of the best students in math and physics, Which one of the following occupations would be the BEST for him?

(A) engineer
(B) librarian
(C) machinist
(D) insurance agent

57. Jan has an interest in the personal needs and problems of other people and to assist them to solve those problems. Which one of the following occupations would be the best?

(A) telephone operator
(B) dentist
(C) social worker
(D) waitress

58. Women make up _____ of the nation's paid workforce.
(A) 26%
(B) 41%
(C) 54%
(D) 76%

59. Out of every 10 young women in high school today,_____ will work for pay outside their homes at some point in their lives.

(A) 9
(B) 7
(C) 5
(D) 3

60. About ____out of ten adult women are either single, widowed, divorced, or separated from their husbands and are therefore responsible for their own financial support.

(A) two
(B) four
(C) six
(D) eight

61. Wanted: Administrator, must have Masters Degree or equivalent; business experience desirable but not necessary; must be able to relate to students.
Is the above job description sex stereotyped.

(A) Yes, a female stereotype.
(B) Yes, a male stereotype.
(C) No, there is no stereotype.

62. At the Barton Steel Mill, the male typists are paid $4.00 per hour and the female typists are paid $3.85 per hour.
What, if anything, in the above situation is illegal according to current sex discrimination laws like Title VII of the Civil Rights Act?

(A) Men and women do not receive equal pay for the same work.
(B) The steel mill underpays its typists.
(C) The steel mill should not have both males and females as typists.
(D) There is no illegal sex discrimination.

63. Alice and Steve both have college degrees in computer programming and have worked for the same company. When they got married Alice quit her job, but often helped Steve with his work. After ten years, Alice and Steve are getting a divorce. Will Alice be able to get a job that pays the same amount of money as Steve's?

(A) Probably yes, because it is hard to find female programmers.
(B) Probably not, because Steve has received salary increases since Alice quit.
(C) Probably yes, because Alice has continued to work with Steve from time to time.
(D) Probably not, because most companies do not approve of divorced women.

64. An employer IS NOT allowed to select an applicant for a job on the basis of which ONE of the following?

(A) whether the applicant has a certain amount of education
(B) whether the applicant has had related job experience
(C) whether the applicant is neat and courteous
(D) whether the applicant is male or female

65. The government has passed laws which provide for protection against job discrimination. Which of the following groups WOULD BENEFIT most from such protection?

(A) people with poor skills who need a job
(B) women whose wages are less than men in the same job
(C) employers who want to hire their relatives
(D) labor unions who want higher wages for their workers

# APPENDIX B

# DETAILED INSTRUMENTATION EVALUATION

## EXPLANATION OF TERMS FOR

## APPENDIX B

| | |
|---|---|
| Item | Question |
| Item Number | Question Number |
| Option | Response Possibilities |
| WT | Weight (one for correct answer) |
| N | Number of respondents giving each response. |
| P | Percentage of respondents giving each response. |
| PB-ST, PB-TT | Point-biserial correlation coefficient (higher the positive value; the more discriminating the test item) |
| B-ST B-TT | Biserial correlation coefficient (higher the positive value; the more discriminating the test item) |
| Means ST, TT | Mean test score for group responding to respective option possibility |

All item analyses were done using experimental, post-test data.

CAREER SKILLS

OBJECTIVE I

TEST NO 1 CED POST EXP 01 SUBTEST 1

ITEM NUMBER 1

| | | | | | COEFFICIENTS OF CORRELATION | | | | MEANS | |
|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
| 1 | 0 | 6 | 15.0 | | -0.64 | -0.64 | -0.97 | -0.97 | 7.33 | 7.33 |
| C 2 | 1 | 31 | 77.5 | C | 0.63 | 0.63 | 0.86 | 0.86 | C 10.26 | 10.26 |
| 3 | 0 | 2 | 5.0 | | -0.03 | -0.03 | -0.07 | -0.07 | 9.50 | 9.50 |
| 4 | 0 | 1 | 2.5 | | -0.17 | -0.17 | -0.47 | -0.47 | 8.00 | 8.00 |
| TOTAL | | 40 | | | | | | | | |

ITEM NUMBER 2

| | | | | | COEFFICIENTS OF CORRELATION | | | | MEANS | |
|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 39 | 97.5 | C | 0.48 | 0.48 | 0.95 | 0.95 | C 9.85 | 9.85 |
| 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| OTHER | 0 | 1 | 2.5 | | -0.48 | -0.48 | -1.28 | -1.28 | 5.00 | 5.00 |
| TOTAL | | 40 | | | | | | | | |

ITEM NUMBER 3

| | | | | | COEFFICIENTS OF CORRELATION | | | | MEANS | |
|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
| C 1 | 1 | 40 | 100.0 | C | 0.0 | 0.0 | 0.0 | 0.0 | C 9.72 | 9.72 |
| 2 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | |

ITEM NUMBER 4

| | | | | | COEFFICIENTS OF CORRELATION | | | | MEANS | |
|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
| 1 | 0 | 6 | 15.0 | | -0.37 | -0.37 | -0.57 | -0.57 | 8.33 | 8.33 |
| 2 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 34 | 85.0 | C | 0.37 | 0.37 | 0.55 | 0.55 | C 9.97 | 9.97 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | |

ITEM NUMBER 5

| | | | | | COEFFICIENTS OF CORRELATION | | | | MEANS | |
|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 36 | 90.0 | C | 0.36 | 0.36 | 0.59 | 0.59 | C 9.92 | 9.92 |
| 3 | 0 | 1 | 2.5 | | -0.28 | -0.28 | -0.74 | -0.74 | 7.00 | 7.00 |
| 4 | 0 | 3 | 7.5 | | -0.25 | -0.25 | -0.47 | -0.47 | 8.33 | 8.33 |
| TOTAL | | 40 | | | | | | | | |

TEST NO 1 LED POST EXP 01 SUBTEST 1

ITEM NUMBER 6 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 37 | 92.5 | 0.49 | 0.49 | 0.84 | 0.84 | 9.95 | 9.95 |
| 4 | 0 | 3 | 7.5 | -0.49 | -0.49 | -0.91 | -0.91 | 7.00 | 7.00 |
| TOTAL | | 40 | | | | | | | |

ITEM NUMBER 7 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 30 | 75.0 | 0.59 | 0.59 | 0.80 | 0.80 | 10.27 | 10.27 |
| 2 | 0 | 8 | 20.0 | -0.55 | -0.55 | -0.78 | -0.78 | 8.00 | 8.00 |
| 3 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 2 | 5.0 | -0.18 | -0.18 | -0.38 | -0.38 | 8.50 | 8.50 |
| TOTAL | | 40 | | | | | | | |

ITEM NUMBER 8 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 37 | 92.5 | 0.43 | 0.43 | 0.74 | 0.74 | 9.92 | 9.92 |
| 3 | 0 | 3 | 7.5 | -0.43 | -0.43 | -0.80 | -0.80 | 7.33 | 7.33 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | |

ITEM NUMBER 9 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 1 | 2.5 | -0.28 | -0.28 | -0.74 | -0.74 | 7.00 | 7.00 |
| C 3 | 1 | 35 | 87.5 | 0.60 | 0.60 | 0.94 | 0.94 | 10.09 | 10.09 |
| 4 | 0 | 4 | 10.0 | -0.52 | -0.52 | -0.89 | -0.89 | 7.25 | 7.25 |
| TOTAL | | 40 | | | | | | | |

ITEM NUMBER 10 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | B-ST | B-TT | ST | TT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 7.5 | -0.25 | -0.25 | -0.47 | -0.47 | 8.33 | 8.33 |
| 2 | 0 | 1 | 2.5 | 0.03 | 0.03 | 0.07 | 0.07 | 10.00 | 10.00 |
| C 3 | 1 | 33 | 82.5 | 0.38 | 0.38 | 0.55 | 0.55 | 10.00 | 10.00 |
| 4 | 0 | 3 | 7.5 | -0.31 | -0.31 | -0.58 | -0.58 | 8.00 | 8.00 |
| TOTAL | | 40 | | | | | | | |

TEST NO 1 ECO POST EXP 01 SUBTEST 1

ITEM NUMBER 11 COEFFICIENTS OF CORRELATION MEANS

| | OPTION | WT | N | P | | PB-ST | PB-TT | B-ST | B-TT | | ST | TT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C 1 | 1 | 37 | 92.5 | C | 0.61 | 0.61 | 1.05 | 1.05 | C | 10.00 | 10.00 |
| | 2 | 0 | 2 | 5.0 | | -0.54 | -0.54 | -1.14 | -1.14 | | 6.00 | 6.00 |
| | 3 | 0 | 1 | 2.5 | | -0.28 | -0.28 | -0.74 | -0.74 | | 7.00 | 7.00 |
| | TOTAL | | 40 | | | | | | | | | |

LERTAP 2.0 SUBTEST STATISTICS

TEST NO. 1 CLO POST EXP 01 SUBTEST 1

NUMBER OF INDIVIDUALS = 40.00 NUMBER OF ITEMS = 11.00

MEAN = 9.72 HIGHEST SCORE = 11.00

STANDARD DEVIATION = 1.60 LOWEST SCORE = 5.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 39.00 | 9.09 | 0.23 |
| ITEMS | 10.00 | 2.46 | 0.25 |
| RESIDUAL | 390.00 | 33.54 | 0.09 |
| TOTAL | 439.00 | 45.09 | 0.10 |

HOYT ESTIMATE OF RELIABILITY = 0.63

STANDARD ERROR OF MEASUREMENT = 0.93

CAREER SKILLS

OBJECTIVE II

TEST NO 1 CED PEST EXP DIF SUBTEST 1

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM NUMBER 1 | | | | | | | | | | | | | |
| OPTION | WT | N | P | | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | ST | IT | EC |
| 1 | 0 | 2 | 5.0 | | -0.29 | -0.29 | 0.0 | -0.61 | -0.61 | 0.0 | 8.00 | 8.00 | 4.00 |
| C 2 | 1 | 36 | 90.0 | C | 0.33 | 0.33 | 0.0 | 0.51 | 0.51 | 0.0 C | 10.56 | 10.56 | 4.00 |
| 3 | 0 | 1 | 2.5 | | -0.20 | -0.20 | 0.0 | -0.54 | -0.54 | 0.0 | 8.00 | 8.00 | 4.00 |
| 4 | 0 | 1 | 2.5 | | -0.03 | -0.03 | 0.0 | -0.08 | -0.08 | 0.0 | 10.00 | 10.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |
| ITEM NUMBER 2 | | | | | | | | | | | | | |
| OPTION | WT | N | P | | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | ST | IT | EC |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 40 | 100.0 | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 C | 10.35 | 10.35 | 4.00 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | | |
| ITEM NUMBER 3 | | | | | | | | | | | | | |
| OPTION | WT | N | P | | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | ST | IT | EC |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 32 | 80.0 | C | 0.23 | 0.23 | 0.0 | 0.32 | 0.32 | 0.0 C | 10.56 | 10.56 | 4.00 |
| 3 | 0 | 4 | 10.0 | | -0.11 | -0.11 | 0.0 | -0.18 | -0.18 | 0.0 | 9.75 | 9.75 | 4.00 |
| 4 | 0 | 4 | 10.0 | | -0.20 | -0.20 | 0.0 | -0.33 | -0.33 | 0.0 | 9.25 | 9.25 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |
| ITEM NUMBER 4 | | | | | | | | | | | | | |
| OPTION | WT | N | P | | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | ST | IT | EC |
| 1 | 0 | 1 | 2.5 | | -0.20 | -0.20 | 0.0 | -0.54 | -0.54 | 0.0 | 8.00 | 8.00 | 4.00 |
| 2 | 0 | 1 | 2.5 | | 0.08 | 0.08 | 0.0 | 0.15 | 0.15 | 0.0 | 11.00 | 11.00 | 4.00 |
| 3 | 0 | 1 | 2.5 | | -0.20 | -0.20 | 0.0 | -0.54 | -0.54 | 0.0 | 8.00 | 8.00 | 4.00 |
| C 4 | 1 | 37 | 92.5 | C | 0.20 | 0.20 | 0.0 | 0.35 | 0.35 | 0.0 C | 10.46 | 10.46 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |
| ITEM NUMBER 5 | | | | | | | | | | | | | |
| OPTION | WT | N | P | | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | ST | IT | EC |
| 1 | 0 | 4 | 10.0 | | -0.51 | -0.51 | 0.0 | -0.86 | -0.86 | 0.0 | 7.50 | 7.50 | 4.00 |
| 2 | 0 | 3 | 7.5 | | -0.20 | -0.20 | 0.0 | -0.38 | -0.38 | 0.0 | 9.00 | 9.00 | 4.00 |
| 3 | 0 | 7 | 17.5 | | -0.26 | -0.26 | 0.0 | -0.38 | -0.38 | 0.0 | 9.29 | 9.29 | 4.00 |
| C 4 | 1 | 26 | 65.0 | C | 0.64 | 0.64 | 0.0 | 0.82 | 0.82 | 0.0 C | 11.23 | 11.23 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

TEST NO 1 CED POST EXP DIF SUBTEST 1

ITEM NUMBER 8

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | IT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | | -0.41 | -0.41 | 0.0 | -0.87 | -0.87 | 0.0 | | 7.00 | 7.00 | 4.00 |
| C 2 | 1 | 37 | 92.5 | C | 0.36 | 0.36 | 0.0 | 0.61 | 0.61 | 0.0 | C | 10.54 | 10.54 | 4.00 |
| 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 1 | 2.5 | | -0.03 | -0.03 | 0.0 | -0.08 | -0.08 | 0.0 | | 10.00 | 10.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 7

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | IT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | | -0.12 | -0.12 | 0.0 | -0.31 | -0.31 | 0.0 | | 9.00 | 9.00 | 4.00 |
| C 2 | 1 | 32 | 80.0 | C | 0.53 | 0.53 | 0.0 | 0.74 | 0.74 | 0.0 | C | 10.84 | 10.84 | 4.00 |
| 3 | 0 | 4 | 10.0 | | -0.46 | -0.46 | 0.0 | -0.79 | -0.79 | 0.0 | | 7.75 | 7.75 | 4.00 |
| 4 | 0 | 3 | 7.5 | | -0.20 | -0.20 | 0.0 | -0.38 | -0.38 | 0.0 | | 9.00 | 9.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 8

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | IT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 35 | 87.5 | C | 0.31 | 0.31 | 0.0 | 0.48 | 0.48 | 0.0 | C | 10.57 | 10.57 | 4.00 |
| 2 | 0 | 1 | 2.5 | | -0.46 | -0.46 | 0.0 | -1.22 | -1.22 | 0.0 | | 5.00 | 5.00 | 4.00 |
| 3 | 0 | 2 | 5.0 | | 0.08 | 0.08 | 0.0 | 0.17 | 0.17 | 0.0 | | 11.00 | 11.00 | 4.00 |
| 4 | 0 | 2 | 5.0 | | -0.23 | -0.23 | 0.0 | -0.48 | -0.48 | 0.0 | | 8.50 | 8.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 9

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | IT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 17.5 | | 0.02 | 0.02 | 0.0 | 0.03 | 0.03 | 0.0 | | 10.43 | 10.43 | 4.00 |
| 2 | 0 | 5 | 12.5 | | -0.43 | -0.43 | 0.0 | -0.70 | -0.70 | 0.0 | | 8.20 | 8.20 | 4.00 |
| C 3 | 1 | 25 | 62.5 | C | 0.34 | 0.34 | 0.0 | 0.43 | 0.43 | 0.0 | C | 10.84 | 10.84 | 4.00 |
| 4 | 0 | 3 | 7.5 | | -0.10 | -0.10 | 0.0 | -0.19 | -0.19 | 0.0 | | 9.67 | 9.67 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 10

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | IT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.5 | | -0.35 | -0.35 | 0.0 | -0.57 | -0.57 | 0.0 | | 8.60 | 8.60 | 4.00 |
| 2 | 0 | 3 | 7.5 | | -0.05 | -0.05 | 0.0 | -0.10 | -0.10 | 0.0 | | 10.00 | 10.00 | 4.00 |
| C 3 | 1 | 25 | 62.5 | C | 0.45 | 0.45 | 0.0 | 0.57 | 0.57 | 0.0 | C | 11.00 | 11.00 | 4.00 |
| 4 | 0 | 7 | 17.5 | | -0.23 | -0.23 | 0.0 | -0.33 | -0.33 | 0.0 | | 9.43 | 9.43 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

TEST NO 1 CED POST EXP 011 SUBTEST 1

ITEM NUMBER 11

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| C 1 | 1 | 25 | 62.5 | C | 0.28 | 0.28 | 0.0 | 0.36 | 0.36 | 0.0 | C | 10.76 | 10.76 | 4.00 |
| 2 | 0 | 7 | 17.5 | | -0.02 | -0.02 | 0.0 | -0.02 | -0.02 | 0.0 | | 10.29 | 10.29 | 4.00 |
| 3 | 0 | 4 | 10.0 | | -0.24 | -0.24 | 0.0 | -0.41 | -0.41 | 0.0 | | 9.00 | 9.00 | 4.00 |
| 4 | 0 | 2 | 5.0 | | -0.04 | -0.04 | 0.0 | -0.09 | -0.09 | 0.0 | | 10.00 | 10.00 | 4.00 |
| OTHER | 0 | 2 | 5.0 | | -0.23 | -0.23 | 0.0 | -0.48 | -0.48 | 0.0 | | 8.50 | 8.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 12

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| 1 | 0 | 3 | 7.5 | | -0.36 | -0.36 | 0.0 | -0.66 | -0.66 | 0.0 | | 8.00 | 8.00 | 4.00 |
| C 2 | 1 | 15 | 37.5 | C | 0.32 | 0.32 | 0.0 | 0.41 | 0.41 | 0.0 | C | 11.13 | 11.13 | 4.00 |
| 3 | 0 | 5 | 12.5 | | 0.05 | 0.05 | 0.0 | 0.08 | 0.08 | 0.0 | | 10.60 | 10.60 | 4.00 |
| 4 | 0 | 17 | 42.5 | | -0.16 | -0.16 | 0.0 | -0.20 | -0.20 | 0.0 | | 10.00 | 10.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 13

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| C 1 | 1 | 21 | 52.5 | C | 0.20 | 0.20 | 0.0 | 0.26 | 0.26 | 0.0 | C | 10.71 | 10.71 | 4.00 |
| 2 | 0 | 4 | 10.0 | | -0.24 | -0.24 | 0.0 | -0.41 | -0.41 | 0.0 | | 9.00 | 9.00 | 4.00 |
| 3 | 0 | 10 | 25.0 | | -0.11 | -0.11 | 0.0 | -0.15 | -0.15 | 0.0 | | 10.00 | 10.00 | 4.00 |
| 4 | 0 | 5 | 12.5 | | 0.05 | 0.05 | 0.0 | 0.08 | 0.08 | 0.0 | | 10.60 | 10.60 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 14

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 28 | 70.0 | C | 0.33 | 0.33 | 0.0 | 0.43 | 0.43 | 0.0 | C | 10.75 | 10.75 | 4.00 |
| 3 | 0 | 6 | 15.0 | | -0.34 | -0.34 | 0.0 | -0.52 | -0.52 | 0.0 | | 8.83 | 8.83 | 4.00 |
| 4 | 0 | 6 | 15.0 | | -0.08 | -0.08 | 0.0 | -0.12 | -0.12 | 0.0 | | 10.00 | 10.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

TEST NO 1 CED POST EXP OIE SUBTEST 1

NUMBER OF INDIVIDUALS = 40.00 NUMBER OF ITEMS = 14.00

MEAN = 10.35 HIGHEST SCORE = 14.00

STANDARD DEVIATION = 1.90 LOWEST SCORE = 5.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 39.00 | 10.08 | 0.26 |
| ITEMS | 13.00 | 16.64 | 1.28 |
| RESIDUAL | 507.00 | 81.22 | 0.16 |
| TOTAL | 559.00 | 107.94 | 0.19 |

HOYT ESTIMATE OF RELIABILITY = 0.38

STANDARD ERROR OF MEASUREMENT = 1.44

CAREER SKILLS

OBJECTIVE III

TEST NO 1 CLO POST EXP 0 111 SUBTEST 1

ITEM NUMBER 1 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | -0.41 | -0.41 | 0.0 | -0.87 | -0.87 | 0.0 | 4.00 | 4.00 | 4.00 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 38 | 95.0 | C 0.41 | 0.41 | 0.0 | 0.76 | 0.76 | 0.0 C | 6.92 | 6.92 | 4.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 2 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 37 | 92.5 | C 0.27 | 0.27 | 0.0 | 0.46 | 0.46 | 0.0 C | 6.89 | 6.89 | 4.00 |
| 3 | 0 | 3 | 7.5 | -0.27 | -0.27 | 0.0 | -0.50 | -0.50 | 0.0 | 5.33 | 5.33 | 4.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 3 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 30 | 75.0 | C 0.63 | 0.63 | 0.0 | 0.85 | 0.85 | 0.0 C | 7.33 | 7.33 | 4.00 |
| 2 | 0 | 6 | 15.0 | -0.35 | -0.35 | 0.0 | -0.53 | -0.53 | 0.0 | 5.50 | 5.50 | 4.00 |
| 3 | 0 | 2 | 5.0 | -0.34 | -0.34 | 0.0 | -0.72 | -0.72 | 0.0 | 4.50 | 4.50 | 4.00 |
| 4 | 0 | 2 | 5.0 | -0.34 | -0.34 | 0.0 | -0.72 | -0.72 | 0.0 | 4.50 | 4.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 4 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 2 | 5.0 | -0.04 | -0.04 | 0.0 | -0.09 | -0.09 | 0.0 | 6.50 | 6.50 | 4.00 |
| C 3 | 1 | 36 | 90.0 | C 0.49 | 0.49 | 0.0 | 0.80 | 0.80 | 0.0 C | 7.03 | 7.03 | 4.00 |
| 4 | 0 | 2 | 5.0 | -0.64 | -0.64 | 0.0 | -1.35 | -1.35 | 0.0 | 2.50 | 2.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 5 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | -0.64 | -0.64 | 0.0 | -1.35 | -1.35 | 0.0 | 2.50 | 2.50 | 4.00 |
| 2 | 0 | 5 | 12.5 | -0.48 | -0.48 | 0.0 | -0.78 | -0.78 | 0.0 | 4.80 | 4.80 | 4.00 |
| 3 | 0 | 1 | 2.5 | -0.08 | -0.08 | 0.0 | -0.22 | -0.22 | 0.0 | 6.00 | 6.00 | 4.00 |
| C 4 | 1 | 32 | 80.0 | C 0.78 | 0.78 | 0.0 | 1.10 | 1.10 | 0.0 C | 7.38 | 7.38 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

TEST NO 1 CED POST EXP 0 111 SUBTEST 1

ITEM NUMBER 6 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | -0.39 | -0.39 | 0.0 | -1.05 | -1.05 | 0.0 | 3.00 | 3.00 | 4.00 |
| 2 | 0 | 3 | 7.5 | -0.33 | -0.33 | 0.0 | -0.61 | -0.61 | 0.0 | 5.00 | 5.00 | 4.00 |
| 3 | 0 | 5 | 12.5 | -0.09 | -0.09 | 0.0 | -0.15 | -0.15 | 0.0 | 6.40 | 6.40 | 4.00 |
| C 4 | 1 | 31 | 77.5 | C 0.43 | 0.43 | 0.0 | 0.59 | 0.59 | 0.0 C | 7.13 | 7.13 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 7 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 30 | 75.0 | C 0.67 | 0.67 | 0.0 | 0.90 | 0.90 | 0.0 C | 7.37 | 7.37 | 4.00 |
| 2 | 0 | 3 | 7.5 | -0.20 | -0.20 | 0.0 | -0.38 | -0.38 | 0.0 | 5.67 | 5.67 | 4.00 |
| 3 | 0 | 6 | 15.0 | -0.53 | -0.53 | 0.0 | -0.81 | -0.81 | 0.0 | 4.83 | 4.83 | 4.00 |
| 4 | 0 | 1 | 2.5 | -0.29 | -0.29 | 0.0 | -0.77 | -0.77 | 0.0 | 4.00 | 4.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 8 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 3 | 7.5 | -0.70 | -0.70 | 0.0 | -1.30 | -1.30 | 0.0 | 3.00 | 3.00 | 4.00 |
| C 3 | 1 | 37 | 92.5 | C 0.70 | 0.70 | 0.0 | 1.20 | 1.20 | 0.0 C | 7.08 | 7.08 | 4.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | |

TEST NO 1 CED POST EXP O III SUBTEST 1

NUMBER OF INDIVIDUALS = 40.00 NUMBER OF ITEMS = 8.00

MEAN = 6.77 HIGHEST SCORE = 8.00

STANDARD DEVIATION = 1.56 LOWEST SCORE = 2.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 39.00 | 11.87 | 0.30 |
| ITEMS | 7.00 | 2.07 | 0.30 |
| RESIDUAL | 273.00 | 27.55 | 0.10 |
| TOTAL | 319.00 | 41.50 | 0.13 |

HOYT ESTIMATE OF RELIABILITY = 0.67

STANDARD ERROR OF MEASUREMENT = 0.84

CAREER SKILLS

OBJECTIVE IV

TEST NO CED POST EXP O IV SUBTEST 1

ITEM NUMBER 1

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 1 | 2.5 | -0.16 | -0.16 | 0.0 | -0.43 | -0.43 | 0.0 | | 5.00 | 5.00 | 4.00 |
| | 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C | 3 | 1 | 39 | 97.5 | C 0.16 | 0.16 | 0.0 | 0.32 | 0.32 | 0.0 | C | 5.97 | 5.97 | 4.00 |
| | 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 2

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 5 | 12.5 | -0.22 | -0.22 | 0.0 | -0.35 | -0.35 | 0.0 | | 5.40 | 5.40 | 4.00 |
| C | 2 | 1 | 31 | 77.5 | C 0.48 | 0.48 | 0.0 | 0.66 | 0.66 | 0.0 | C | 6.19 | 6.19 | 4.00 |
| | 3 | 0 | 2 | 5.0 | -0.11 | -0.11 | 0.0 | -0.23 | -0.23 | 0.0 | | 5.50 | 5.50 | 4.00 |
| | 4 | 0 | 2 | 5.0 | -0.47 | -0.47 | 0.0 | -1.00 | -1.00 | 0.0 | | 4.00 | 4.00 | 4.00 |
| | TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 3

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 6 | 15.0 | -0.20 | -0.20 | 0.0 | -0.31 | -0.31 | 0.0 | | 5.50 | 5.50 | 4.00 |
| | 2 | 0 | 6 | 15.0 | -0.35 | -0.35 | 0.0 | -0.53 | -0.53 | 0.0 | | 5.17 | 5.17 | 4.00 |
| C | 3 | 1 | 28 | 70.0 | C 0.43 | 0.43 | 0.0 | 0.56 | 0.56 | 0.0 | C | 6.21 | 6.21 | 4.00 |
| | 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 4

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 1 | 2.5 | -0.16 | -0.16 | 0.0 | -0.43 | -0.43 | 0.0 | | 5.00 | 5.00 | 4.00 |
| C | 2 | 1 | 36 | 90.0 | C 0.25 | 0.25 | 0.0 | 0.40 | 0.40 | 0.0 | C | 6.03 | 6.03 | 4.00 |
| | 3 | 0 | 2 | 5.0 | -0.23 | -0.23 | 0.0 | -0.49 | -0.49 | 0.0 | | 5.00 | 5.00 | 4.00 |
| | 4 | 0 | 1 | 2.5 | 0.01 | 0.01 | 0.0 | 0.02 | 0.02 | 0.0 | | 6.00 | 6.00 | 4.00 |
| | TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 5

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 5 | 12.5 | -0.62 | -0.62 | 0.0 | -0.99 | -0.99 | 0.0 | | 4.40 | 4.40 | 4.00 |
| | 2 | 0 | 1 | 2.5 | 0.01 | 0.01 | 0.0 | 0.02 | 0.02 | 0.0 | | 6.00 | 6.00 | 4.00 |
| C | 3 | 1 | 34 | 85.0 | C 0.57 | 0.57 | 0.0 | 0.85 | 0.85 | 0.0 | C | 6.18 | 6.18 | 4.00 |
| | 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | TOTAL | | 40 | | | | | | | | | | | |

TEST NO 1 CED POST EXP D IV SUBTEST 1

ITEM NUMBER 6 COEFFICIENTS OF CORRELATION: MEANS

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 6 | 15.0 | -0.35 | -0.35 | 0.0 | -0.53 | -0.53 | 0.0 | | 5.17 | 5.17 | 4.00 |
| | 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | 3 | 0 | 1 | 2.5 | -0.33 | -0.33 | 0.0 | -0.88 | -0.88 | 0.0 | | 4.00 | 4.00 | 4.00 |
| C | 4 | 1 | 33 | 82.5 | C 0.46 | 0.46 | 0.0 | 0.67 | 0.67 | 0.0 | C | 6.15 | 6.15 | 4.00 |
| | TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 7 COEFFICIENTS OF CORRELATION MEANS

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 1 | 1 | 37 | 92.5 | C 0.29 | 0.29 | 0.0 | 0.49 | 0.49 | 0.0 | C | 6.03 | 6.03 | 4.00 |
| | 2 | 0 | 3 | 7.5 | -0.29 | -0.29 | 0.0 | -0.53 | -0.53 | 0.0 | | 5.00 | 5.00 | 4.00 |
| | 3 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | TOTAL | | 40 | | | | | | | | | | | |

TEST NO 1 CED POST EXP O IV SUBTEST 1

NUMBER OF INDIVIDUALS = 40.00 NUMBER OF ITEMS = 7.00

MEAN = 5.95 HIGHEST SCORE = 7.00

STANDARD DEVIATION = 0.96 LOWEST SCORE = 3.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 39.00 | 5.13 | 0.13 |
| ITEMS | 6.00 | 2.10 | 0.35 |
| RESIDUAL | 234.00 | 28.47 | 0.12 |
| TOTAL | 279.00 | 35.70 | 0.13 |

HOYT ESTIMATE OF RELIABILITY = 0.07

STANDARD ERROR OF MEASUREMENT = 0.85

CAREER SKILLS

OBJECTIVE VII

TEST NO 1 CED POST EXP 0 VII SUBTEST 1

ITEM NUMBER 1

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | | 0.10 | 0.10 | 0.0 | 0.27 | 0.27 | 0.0 | | 16.00 | 16.00 | 4.00 |
| 2 | 0 | 2 | 5.0 | | -0.26 | -0.26 | 0.0 | -0.55 | -0.55 | 0.0 | | 12.00 | 12.00 | 4.00 |
| C 3 | 1 | 36 | 90.0 | C | 0.19 | 0.19 | 0.0 | 0.32 | 0.32 | 0.0 | C | 14.72 | 14.72 | 4.00 |
| 4 | 0 | 1 | 2.5 | | -0.11 | -0.11 | 0.0 | -0.30 | -0.30 | 0.0 | | 13.00 | 13.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 2

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | | 0.04 | 0.04 | 0.0 | 0.09 | 0.09 | 0.0 | | 15.00 | 15.00 | 4.00 |
| 2 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 38 | 95.0 | C | -0.04 | -0.04 | 0.0 | -0.08 | -0.08 | 0.0 | C | 14.55 | 14.55 | 4.00 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 3

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 39 | 97.5 | C | 0.46 | 0.46 | 0.0 | 0.92 | 0.92 | 0.0 | C | 14.74 | 14.74 | 4.00 |
| 4 | 0 | 1 | 2.5 | | -0.46 | -0.46 | 0.0 | -1.24 | -1.24 | 0.0 | | 8.00 | 8.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 4

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 39 | 97.5 | C | 0.46 | 0.46 | 0.0 | 0.92 | 0.92 | 0.0 | C | 14.74 | 14.74 | 4.00 |
| 3 | 0 | 1 | 2.5 | | -0.46 | -0.46 | 0.0 | -1.24 | -1.24 | 0.0 | | 8.00 | 8.00 | 4.00 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 5

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 7.5 | | -0.32 | -0.32 | 0.0 | -0.60 | -0.60 | 0.0 | | 12.00 | 12.00 | 4.00 |
| 2 | 0 | 1 | 2.5 | | -0.39 | -0.39 | 0.0 | -1.05 | -1.05 | 0.0 | | 9.00 | 9.00 | 4.00 |
| C 3 | 1 | 34 | 85.0 | C | 0.35 | 0.35 | 0.0 | 0.53 | 0.53 | 0.0 | C | 14.91 | 14.91 | 4.00 |
| 4 | 0 | 2 | 5.0 | | 0.09 | 0.09 | 0.0 | 0.20 | 0.20 | 0.0 | | 15.50 | 15.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

TEST NO 1 CED POST EXP O VII SUBTEST 1

ITEM NUMBER 6

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | -0.16 | -0.16 | 0.0 | -0.34 | -0.34 | 0.0 | | 13.00 | 13.00 | 4.00 |
| 2 | 0 | 1 | 2.5 | -0.46 | -0.46 | 0.0 | -1.24 | -1.24 | 0.0 | | 8.00 | 8.00 | 4.00 |
| 3 | 0 | 4 | 10.0 | -0.16 | -0.16 | 0.0 | -0.27 | -0.27 | 0.0 | | 13.50 | 13.50 | 4.00 |
| C 4 | 1 | 33 | 82.5 | C 0.41 | 0.41 | 0.0 | 0.59 | 0.59 | 0.0 | C | 15.00 | 15.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 7

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 10.0 | -0.19 | -0.19 | 0.0 | -0.33 | -0.33 | 0.0 | | 13.25 | 13.25 | 4.00 |
| 2 | 0 | 2 | 5.0 | -0.01 | -0.01 | 0.0 | -0.02 | -0.02 | 0.0 | | 14.50 | 14.50 | 4.00 |
| 3 | 0 | 4 | 10.0 | -0.19 | -0.19 | 0.0 | -0.33 | -0.33 | 0.0 | | 13.25 | 13.25 | 4.00 |
| C 4 | 1 | 30 | 75.0 | C 0.27 | 0.27 | 0.0 | 0.37 | 0.37 | 0.0 | C | 14.93 | 14.93 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 8

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 35 | 87.5 | C 0.40 | 0.40 | 0.0 | 0.61 | 0.61 | 0.0 | C | 14.91 | 14.91 | 4.00 |
| 2 | 0 | 3 | 7.5 | 0.01 | 0.01 | 0.0 | 0.02 | 0.02 | 0.0 | | 14.67 | 14.67 | 4.00 |
| 3 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 2 | 5.0 | -0.61 | -0.61 | 0.0 | -1.30 | -1.30 | 0.0 | | 8.50 | 8.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 9

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 32 | 80.0 | C 0.68 | 0.68 | 0.0 | 0.96 | 0.96 | 0.0 | C | 15.34 | 15.34 | 4.00 |
| 2 | 0 | 3 | 7.5 | -0.20 | -0.20 | 0.0 | -0.37 | -0.37 | 0.0 | | 13.00 | 13.00 | 4.00 |
| 3 | 0 | 3 | 7.5 | -0.32 | -0.32 | 0.0 | -0.60 | -0.60 | 0.0 | | 12.00 | 12.00 | 4.00 |
| 4 | 0 | 1 | 2.5 | -0.46 | -0.46 | 0.0 | -1.24 | -1.24 | 0.0 | | 8.00 | 8.00 | 4.00 |
| OTHER | 0 | 1 | 2.5 | -0.39 | -0.39 | 0.0 | -1.05 | -1.05 | 0.0 | | 9.00 | 9.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 10

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | -0.04 | -0.04 | 0.0 | -0.11 | -0.11 | 0.0 | | 14.00 | 14.00 | 4.00 |
| 2 | 0 | 5 | 12.5 | -0.36 | -0.36 | 0.0 | -0.58 | -0.58 | 0.0 | | 12.40 | 12.40 | 4.00 |
| 3 | 0 | 5 | 12.5 | -0.26 | -0.26 | 0.0 | -0.42 | -0.42 | 0.0 | | 13.00 | 13.00 | 4.00 |
| C 4 | 1 | 29 | 72.5 | C 0.48 | 0.48 | 0.0 | 0.64 | 0.64 | 0.0 | C | 15.24 | 15.24 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

TEST NO 1 CED POST EXP 0 VII SUBTEST 1

ITEM NUMBER 11

| OPTION | WT | N | P | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | MEANS IT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | -0.11 | -0.11 | 0.0 | -0.30 | -0.30 | 0.0 | | 13.00 | 13.00 | 4.00 |
| C 2 | 1 | 32 | 80.0 | 0.68 | 0.68 | 0.0 | 0.96 | 0.96 | 0.0 | C | 15.34 | 15.34 | 4.00 |
| 3 | 0 | 5 | 12.5 | -0.70 | -0.70 | 0.0 | -1.12 | -1.12 | 0.0 | | 10.40 | 10.40 | 4.00 |
| 4 | 0 | 2 | 5.0 | -0.11 | -0.11 | 0.0 | -0.23 | -0.23 | 0.0 | | 13.50 | 13.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 12

| OPTION | WT | N | P | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | MEANS IT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 31 | 77.5 | 0.53 | 0.53 | 0.0 | 0.74 | 0.74 | 0.0 | C | 15.23 | 15.23 | 4.00 |
| 2 | 0 | 2 | 5.0 | -0.11 | -0.11 | 0.0 | -0.23 | -0.23 | 0.0 | | 13.50 | 13.50 | 4.00 |
| 3 | 0 | 3 | 7.5 | -0.41 | -0.41 | 0.0 | -0.76 | -0.76 | 0.0 | | 11.33 | 11.33 | 4.00 |
| 4 | 0 | 2 | 5.0 | -0.41 | -0.41 | 0.0 | -0.87 | -0.87 | 0.0 | | 10.50 | 10.50 | 4.00 |
| OTHER | 0 | 2 | 5.0 | -0.01 | -0.01 | 0.0 | -0.02 | -0.02 | 0.0 | | 14.50 | 14.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 13

| OPTION | WT | N | P | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | MEANS IT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 34 | 85.0 | 0.42 | 0.42 | 0.0 | 0.62 | 0.62 | 0.0 | C | 14.97 | 14.97 | 4.00 |
| 2 | 0 | 1 | 2.5 | -0.25 | -0.25 | 0.0 | -0.67 | -0.67 | 0.0 | | 11.00 | 11.00 | 4.00 |
| 3 | 0 | 5 | 12.5 | -0.33 | -0.33 | 0.0 | -0.53 | -0.53 | 0.0 | | 12.60 | 12.60 | 4.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 14

| OPTION | WT | N | P | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | MEANS IT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 34 | 85.0 | 0.45 | 0.45 | 0.0 | 0.67 | 0.67 | 0.0 | C | 15.00 | 15.00 | 4.00 |
| 2 | 0 | 2 | 5.0 | -0.26 | -0.26 | 0.0 | -0.55 | -0.55 | 0.0 | | 12.00 | 12.00 | 4.00 |
| 3 | 0 | 4 | 10.0 | -0.34 | -0.34 | 0.0 | -0.58 | -0.58 | 0.0 | | 12.25 | 12.25 | 4.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 15

| OPTION | WT | N | P | PB-ST | PB-IT | PB-EC | B-ST | B-IT | B-EC | | MEANS ST | MEANS IT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | -0.11 | -0.11 | 0.0 | -0.30 | -0.30 | 0.0 | | 13.00 | 13.00 | 4.00 |
| 2 | 0 | 3 | 7.5 | -0.20 | -0.20 | 0.0 | -0.37 | -0.37 | 0.0 | | 13.00 | 13.00 | 4.00 |
| C 3 | 1 | 30 | 75.0 | 0.38 | 0.38 | 0.0 | 0.51 | 0.51 | 0.0 | C | 15.07 | 15.07 | 4.00 |
| 4 | 0 | 6 | 15.0 | -0.26 | -0.26 | 0.0 | -0.40 | -0.40 | 0.0 | | 13.17 | 13.17 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

TEST NO 1 CED POST EXP 0 VII SUBTEST 1

ITEM NUMBER 16

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | -0.18 | -0.18 | 0.0 | -0.49 | -0.49 | 0.0 | | 12.00 | 12.00 | 4.00 |
| C 2 | 1 | 38 | 95.0 | C 0.21 | 0.21 | 0.0 | 0.38 | 0.38 | 0.0 | C | 14.68 | 14.68 | 4.00 |
| 3 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 1 | 2.5 | -0.11 | -0.11 | 0.0 | -0.30 | -0.30 | 0.0 | | 13.00 | 13.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | |

ITEM NUMBER 17

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | -0.32 | -0.32 | 0.0 | -0.86 | -0.86 | 0.0 | | 10.00 | 10.00 | 4.00 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 39 | 97.5 | C 0.32 | 0.32 | 0.0 | 0.64 | 0.64 | 0.0 | C | 14.69 | 14.69 | 4.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTAL | | 40 | | | | | | | | | | | |

TEST NO 1 CED POST EXP 0 VII SUBTEST 1

NUMBER OF INDIVIDUALS = 40.00 NUMBER OF ITEMS = 17.00

MEAN = 14.57 HIGHEST SCORE = 17.00

STANDARD DEVIATION = 2.30 LOWEST SCORE = 8.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 39.00 | 12.10 | 0.31 |
| ITEMS | 16.00 | 4.64 | 0.29 |
| RESIDUAL | 624.00 | 66.42 | 0.11 |
| TOTAL | 679.00 | 83.16 | 0.12 |

HOYT ESTIMATE OF RELIABILITY = 0.66

STANDARD ERROR OF MEASUREMENT = 1.31

CAREER SKILLS

OBJECTIVE IX

TEST NO 1 CED POST CEXP O IX SUBTEST 1

ITEM NUMBER 1

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.5 | -0.08 | -0.08 | 0.0 | -0.13 | -0.13 | 0.0 | 5.00 | 5.00 | 4.00 |
| 2 | 0 | 16 | 40.0 | 0.06 | 0.06 | 0.0 | 0.08 | 0.08 | 0.0 | 5.38 | 5.38 | 4.00 |
| C 3 | 1 | 17 | 42.5 | C 0.20 | 0.20 | 0.0 | 0.26 | 0.26 | 0.0 C | 5.59 | 5.59 | 4.00 |
| 4 | 0 | 2 | 5.0 | -0.48 | -0.48 | 0.0 | -1.02 | -1.02 | 0.0 | 2.50 | 2.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 2

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 21 | 52.5 | C 0.35 | 0.35 | 0.0 | 0.44 | 0.44 | 0.0 C | 5.71 | 5.71 | 4.00 |
| 2 | 0 | 13 | 32.5 | -0.14 | -0.14 | 0.0 | -0.19 | -0.19 | 0.0 | 5.00 | 5.00 | 4.00 |
| 3 | 0 | 3 | 7.5 | -0.27 | -0.27 | 0.0 | -0.51 | -0.51 | 0.0 | 4.00 | 4.00 | 4.00 |
| 4 | 0 | 3 | 7.5 | -0.13 | -0.13 | 0.0 | -0.24 | -0.24 | 0.0 | 4.67 | 4.67 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 3

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 7.5 | 0.16 | 0.16 | 0.0 | 0.29 | 0.29 | 0.0 | 6.00 | 6.00 | 4.00 |
| C 2 | 1 | 14 | 35.0 | C 0.28 | 0.28 | 0.0 | 0.36 | 0.36 | 0.0 C | 5.79 | 5.79 | 4.00 |
| 3 | 0 | 20 | 50.0 | -0.28 | -0.28 | 0.0 | -0.36 | -0.36 | 0.0 | 4.90 | 4.90 | 4.00 |
| 4 | 0 | 3 | 7.5 | -0.13 | -0.13 | 0.0 | -0.24 | -0.24 | 0.0 | 4.67 | 4.67 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 4

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 3 | 1 | 39 | 97.5 | C 0.52 | 0.52 | 0.0 | 1.02 | 1.02 | 0.0 C | 5.38 | 5.38 | 4.00 |
| 4 | 0 | 1 | 2.5 | -0.52 | -0.52 | 0.0 | -1.38 | -1.38 | 0.0 | 1.00 | 1.00 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

ITEM NUMBER 5

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 28 | 70.0 | C 0.59 | 0.59 | 0.0 | 0.78 | 0.78 | 0.0 C | 5.79 | 5.79 | 4.00 |
| 2 | 0 | 5 | 12.5 | -0.31 | -0.31 | 0.0 | -0.49 | -0.49 | 0.0 | 4.20 | 4.20 | 4.00 |
| 3 | 0 | 4 | 10.0 | -0.38 | -0.38 | 0.0 | -0.66 | -0.66 | 0.0 | 3.75 | 3.75 | 4.00 |
| 4 | 0 | 3 | 7.5 | -0.20 | -0.20 | 0.0 | -0.38 | -0.38 | 0.0 | 4.33 | 4.33 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | |

TEST NO 1 CED POST CEXP 0 IX SUBTEST 1

ITEM NUMBER 6

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.5 | | -0.03 | -0.03 | 0.0 | -0.09 | -0.09 | 0.0 | | 5.00 | 5.00 | 4.00 |
| C 2 | 1 | 22 | 55.0 | C | 0.45 | 0.45 | 0.0 | 0.57 | 0.57 | 0.0 | C | 5.82 | 5.82 | 4.00 |
| 3 | 0 | 13 | 32.5 | | -0.22 | -0.22 | 0.0 | -0.29 | -0.29 | 0.0 | | 4.85 | 4.85 | 4.00 |
| 4 | 0 | 4 | 10.0 | | -0.38 | -0.38 | 0.0 | -0.66 | -0.66 | 0.0 | | 3.75 | 3.75 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 7

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | | -0.31 | -0.31 | 0.0 | -0.65 | -0.65 | 0.0 | | 3.50 | 3.50 | 4.00 |
| 2 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 3 | 0 | 2 | 5.0 | | -0.48 | -0.48 | 0.0 | -1.02 | -1.02 | 0.0 | | 2.50 | 2.50 | 4.00 |
| C 4 | 1 | 36 | 90.0 | C | 0.57 | 0.57 | 0.0 | 0.93 | 0.93 | 0.0 | C | 5.53 | 5.53 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

ITEM NUMBER 8

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 5.0 | | -0.31 | -0.31 | 0.0 | -0.65 | -0.65 | 0.0 | | 3.50 | 3.50 | 4.00 |
| C 2 | 1 | 34 | 85.0 | C | 0.46 | 0.46 | 0.0 | 0.69 | 0.69 | 0.0 | C | 5.53 | 5.53 | 4.00 |
| 3 | 0 | 1 | 2.5 | | -0.15 | -0.15 | 0.0 | -0.41 | -0.41 | 0.0 | | 4.00 | 4.00 | 4.00 |
| 4 | 0 | 1 | 2.5 | | -0.03 | -0.03 | 0.0 | -0.09 | -0.09 | 0.0 | | 5.00 | 5.00 | 4.00 |
| OTHER | 0 | 2 | 5.0 | | -0.31 | -0.31 | 0.0 | -0.65 | -0.65 | 0.0 | | 3.50 | 3.50 | 4.00 |
| TOTAL | | 40 | | | | | | | | | | | | |

TEST NO 1 CED POST CEXP O IX SUBTEST 1

NUMBER OF INDIVIDUALS = 40.00 NUMBER OF ITEMS = 8.00

MEAN = 5.27 HIGHEST SCORE = 8.00

STANDARD DEVIATION = 1.34 LOWEST SCORE = 1.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 39.00 | 8.75 | 0.22 |
| ITEMS | 7.00 | 15.05 | 2.15 |
| RESIDUAL | 273.00 | 48.08 | 0.18 |
| TOTAL | 319.00 | 71.87 | 0.23 |

HOYT ESTIMATE OF RELIABILITY = 0.21

STANDARD ERROR OF MEASUREMENT = 1.11



145

C T B S

READING

TEST NO 1 CIDS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 1

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.19 | -0.19 | 0.0 | -0.52 | -0.52 | 0.0 | | 19.00 | 19.00 | 2.00 |
| C 2 | 1 | 23 | 56.1 | C 0.36 | 0.36 | 0.0 | 0.45 | 0.45 | 0.0 | C | 30.09 | 30.09 | 2.00 |
| 3 | 0 | 9 | 22.0 | -0.29 | -0.29 | 0.0 | -0.40 | -0.40 | 0.0 | | 23.89 | 23.89 | 2.00 |
| 4 | 0 | 8 | 19.5 | -0.07 | -0.07 | 0.0 | -0.10 | -0.10 | 0.0 | | 26.75 | 26.75 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 2

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.06 | -0.06 | 0.0 | -0.17 | -0.17 | 0.0 | | 25.00 | 25.00 | 2.00 |
| 2 | 0 | 9 | 22.0 | -0.21 | -0.21 | 0.0 | -0.29 | -0.29 | 0.0 | | 25.00 | 25.00 | 2.00 |
| C 3 | 1 | 21 | 51.2 | C 0.45 | 0.45 | 0.0 | 0.57 | 0.57 | 0.0 | C | 31.00 | 31.00 | 2.00 |
| 4 | 0 | 10 | 24.4 | -0.31 | -0.31 | 0.0 | -0.42 | -0.42 | 0.0 | | 23.90 | 23.90 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 3

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 7 | 17.1 | -0.37 | -0.37 | 0.0 | -0.55 | -0.55 | 0.0 | | 21.86 | 21.86 | 2.00 |
| 2 | 0 | 4 | 9.8 | -0.36 | -0.36 | 0.0 | -0.61 | -0.61 | 0.0 | | 20.00 | 20.00 | 2.00 |
| C 3 | 1 | 29 | 70.7 | C 0.55 | 0.55 | 0.0 | 0.72 | 0.72 | 0.0 | C | 30.34 | 30.34 | 2.00 |
| 4 | 0 | 1 | 2.4 | -0.02 | -0.02 | 0.0 | -0.05 | -0.05 | 0.0 | | 27.00 | 27.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 4

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | 0.20 | 0.20 | 0.0 | 0.32 | 0.32 | 0.0 | | 31.60 | 31.60 | 2.00 |
| 2 | 0 | 3 | 7.3 | -0.32 | -0.32 | 0.0 | -0.59 | -0.59 | 0.0 | | 19.67 | 19.67 | 2.00 |
| C 3 | 1 | 26 | 63.4 | C 0.09 | 0.09 | 0.0 | 0.12 | 0.12 | 0.0 | C | 28.31 | 28.31 | 2.00 |
| 4 | 0 | 7 | 17.1 | -0.07 | -0.07 | 0.0 | -0.10 | -0.10 | 0.0 | | 26.71 | 26.71 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 5

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 22.0 | 0.09 | 0.09 | 0.0 | 0.12 | 0.12 | 0.0 | | 29.00 | 29.00 | 2.00 |
| C 2 | 1 | 23 | 56.1 | C 0.17 | 0.17 | 0.0 | 0.22 | 0.22 | 0.0 | C | 28.91 | 28.91 | 2.00 |
| 3 | 0 | 4 | 9.8 | -0.14 | -0.14 | 0.0 | -0.24 | -0.24 | 0.0 | | 24.75 | 24.75 | 2.00 |
| 4 | 0 | 5 | 12.2 | -0.25 | -0.25 | 0.0 | -0.40 | -0.40 | 0.0 | | 23.00 | 23.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTOS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 6

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 14.6 | -0.11 | -0.11 | 0.0 | -0.17 | -0.17 | 0.0 | | 25.83 | 25.83 | 2.00 |
| 2 | 0 | 5 | 12.2 | -0.14 | -0.14 | 0.0 | -0.23 | -0.23 | 0.0 | | 25.00 | 25.00 | 2.00 |
| C 3 | 1 | 30 | 73.2 | C 0.20 | 0.20 | 0.0 | 0.26 | 0.26 | 0.0 | C | 28.67 | 28.67 | 2.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 7

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | -0.13 | -0.13 | 0.0 | -0.29 | -0.29 | 0.0 | | 23.50 | 23.50 | 2.00 |
| C 2 | 1 | 35 | 85.4 | C 0.12 | 0.12 | 0.0 | 0.18 | 0.18 | 0.0 | C | 28.17 | 28.17 | 2.00 |
| 3 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 4 | 9.8 | -0.05 | -0.05 | 0.0 | -0.08 | -0.08 | 0.0 | | 26.75 | 26.75 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 8

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.11 | -0.11 | 0.0 | -0.28 | -0.28 | 0.0 | | 23.00 | 23.00 | 2.00 |
| 2 | 0 | 1 | 2.4 | -0.21 | -0.21 | 0.0 | -0.58 | -0.58 | 0.0 | | 18.00 | 18.00 | 2.00 |
| 3 | 0 | 17 | 41.5 | -0.33 | -0.33 | 0.0 | -0.41 | -0.41 | 0.0 | | 25.00 | 25.00 | 2.00 |
| C 4 | 1 | 22 | 53.7 | C 0.42 | 0.42 | 0.0 | 0.53 | 0.53 | 0.0 | C | 30.64 | 30.64 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 9

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.15 | -0.15 | 0.0 | -0.25 | -0.25 | 0.0 | | 24.80 | 24.80 | 2.00 |
| C 2 | 1 | 33 | 80.5 | C 0.17 | 0.17 | 0.0 | 0.25 | 0.25 | 0.0 | C | 28.42 | 28.42 | 2.00 |
| 3 | 0 | 2 | 4.9 | -0.13 | -0.13 | 0.0 | -0.29 | -0.29 | 0.0 | | 23.50 | 23.50 | 2.00 |
| 4 | 0 | 1 | 2.4 | 0.07 | 0.07 | 0.0 | 0.19 | 0.19 | 0.0 | | 31.00 | 31.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 10

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEAN | TT MEAN | EC MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.06 | -0.06 | 0.0 | -0.17 | -0.17 | 0.0 | | 25.00 | 25.00 | 2.00 |
| 2 | 0 | 6 | 14.6 | -0.07 | -0.07 | 0.0 | -0.12 | -0.12 | 0.0 | | 26.50 | 26.50 | 2.00 |
| C 3 | 1 | 33 | 80.5 | C 0.13 | 0.13 | 0.0 | 0.19 | 0.19 | 0.0 | C | 28.27 | 28.27 | 2.00 |
| 4 | 0 | 1 | 2.4 | -0.11 | -0.11 | 0.0 | -0.28 | -0.28 | 0.0 | | 23.00 | 23.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CEAS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 11

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | 0.05 | 0.05 | 0.0 | 0.11 | 0.11 | 0.0 | 29.50 | 29.50 | 2.00 |
| 2 | 0 | 11 | 26.8 | -0.29 | -0.29 | 0.0 | -0.39 | -0.39 | 0.0 | 24.36 | 24.36 | 2.00 |
| 3 | 0 | 7 | 17.1 | -0.20 | -0.20 | 0.0 | -0.30 | -0.30 | 0.0 | 24.57 | 24.57 | 2.00 |
| C 4 | 1 | 21 | 51.2 C | 0.39 | 0.39 | 0.0 | 0.48 | 0.48 | 0.0 C | 30.52 | 30.52 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

COEFFICIENTS OF CORRELATION MEANS

ITEM NUMBER 12

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 34 | 82.9 C | 0.34 | 0.34 | 0.0 | 0.49 | 0.49 | 0.0 C | 28.91 | 28.91 | 2.00 |
| 2 | 0 | 2 | 4.9 | -0.20 | -0.20 | 0.0 | -0.42 | -0.42 | 0.0 | 21.50 | 21.50 | 2.00 |
| 3 | 0 | 4 | 9.8 | -0.38 | -0.38 | 0.0 | -0.65 | -0.65 | 0.0 | 19.50 | 19.50 | 2.00 |
| 4 | 0 | 1 | 2.4 | 0.18 | 0.18 | 0.0 | 0.48 | 0.48 | 0.0 | 36.00 | 36.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

COEFFICIENTS OF CORRELATION MEANS

ITEM NUMBER 13

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | -0.42 | -0.42 | 0.0 | -0.89 | -0.89 | 0.0 | 14.50 | 14.50 | 2.00 |
| 2 | 0 | 8 | 19.5 | -0.12 | -0.12 | 0.0 | -0.18 | -0.18 | 0.0 | 26.00 | 26.00 | 2.00 |
| 3 | 0 | 3 | 7.3 | 0.03 | 0.03 | 0.0 | 0.06 | 0.06 | 0.0 | 28.67 | 28.67 | 2.00 |
| C 4 | 1 | 28 | 68.3 C | 0.28 | 0.28 | 0.0 | 0.36 | 0.36 | 0.0 C | 29.18 | 29.18 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

COEFFICIENTS OF CORRELATION MEANS

ITEM NUMBER 14

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 22.0 | -0.26 | -0.26 | 0.0 | -0.37 | -0.37 | 0.0 | 24.22 | 24.22 | 2.00 |
| C 2 | 1 | 29 | 70.7 C | 0.35 | 0.35 | 0.0 | 0.46 | 0.46 | 0.0 C | 29.41 | 29.41 | 2.00 |
| 3 | 0 | 2 | 4.9 | -0.10 | -0.10 | 0.0 | -0.22 | -0.22 | 0.0 | 24.50 | 24.50 | 2.00 |
| 4 | 0 | 1 | 2.4 | -0.17 | -0.17 | 0.0 | -0.46 | -0.46 | 0.0 | 20.00 | 20.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

COEFFICIENTS OF CORRELATION MEANS

ITEM NUMBER 15

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 33 | 80.5 C | 0.27 | 0.27 | 0.0 | 0.38 | 0.38 | 0.0 C | 28.76 | 28.76 | 2.00 |
| 2 | 0 | 5 | 12.2 | -0.21 | -0.21 | 0.0 | -0.33 | -0.33 | 0.0 | 23.80 | 23.80 | 2.00 |
| 3 | 0 | 3 | 7.3 | -0.15 | -0.15 | 0.0 | -0.28 | -0.28 | 0.0 | 24.00 | 24.00 | 2.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | | 41 | | | | | | | | | | |

TEST NO 1 CTBS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 16

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 9 | 22.0 | -0.17 | -0.17 | 0.0 | -0.24 | -0.24 | 0.0 | | 25.44 | 25.44 | 2.00 |
| C | 2 | 1 | 29 | 70.7 | C 0.28 | 0.28 | 0.0 | 0.37 | 0.37 | 0.0 | C | 29.10 | 29.10 | 2.00 |
| | 3 | 0 | 1 | 2.4 | -0.21 | -0.21 | 0.0 | -0.58 | -0.58 | 0.0 | | 18.00 | 18.00 | 2.00 |
| | 4 | 0 | 2 | 4.9 | -0.10 | -0.10 | 0.0 | -0.22 | -0.22 | 0.0 | | 24.50 | 24.50 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 17

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 1 | 1 | 15 | 36.6 | C 0.36 | 0.36 | 0.0 | 0.46 | 0.46 | 0.0 | C | 31.20 | 31.20 | 2.00 |
| | 2 | 0 | 6 | 14.6 | -0.18 | -0.18 | 0.0 | -0.28 | -0.28 | 0.0 | | 24.67 | 24.67 | 2.00 |
| | 3 | 0 | 8 | 19.5 | -0.03 | -0.03 | 0.0 | -0.04 | -0.04 | 0.0 | | 27.38 | 27.38 | 2.00 |
| | 4 | 0 | 11 | 26.8 | -0.07 | -0.07 | 0.0 | -0.09 | -0.09 | 0.0 | | 27.00 | 27.00 | 2.00 |
| | OTHER | 0 | 1 | 2.4 | -0.43 | -0.43 | 0.0 | -1.17 | -1.17 | 0.0 | | 8.00 | 8.00 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 18

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 1 | 2.4 | -0.17 | -0.17 | 0.0 | -0.46 | -0.46 | 0.0 | | 20.00 | 20.00 | 2.00 |
| | 2 | 0 | 5 | 12.2 | -0.55 | -0.55 | 0.0 | -0.88 | -0.88 | 0.0 | | 17.20 | 17.20 | 2.00 |
| | 3 | 0 | 8 | 19.5 | -0.12 | -0.12 | 0.0 | -0.18 | -0.18 | 0.0 | | 26.00 | 26.00 | 2.00 |
| C | 4 | 1 | 27 | 65.9 | C 0.54 | 0.54 | 0.0 | 0.69 | 0.69 | 0.0 | C | 30.59 | 30.59 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 19

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 1 | 1 | 20 | 48.8 | C 0.35 | 0.35 | 0.0 | 0.44 | 0.44 | 0.0 | C | 30.40 | 30.40 | 2.00 |
| | 2 | 0 | 10 | 24.4 | -0.23 | -0.23 | 0.0 | -0.31 | -0.31 | 0.0 | | 24.90 | 24.90 | 2.00 |
| | 3 | 0 | 2 | 4.9 | -0.32 | -0.32 | 0.0 | -0.69 | -0.69 | 0.0 | | 17.50 | 17.50 | 2.00 |
| | 4 | 0 | 9 | 22.0 | -0.02 | -0.02 | 0.0 | -0.03 | -0.03 | 0.0 | | 27.56 | 27.56 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 20

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 3 | 7.3 | -0.33 | -0.33 | 0.0 | -0.62 | -0.62 | 0.0 | | 19.33 | 19.33 | 2.00 |
| C | 2 | 1 | 31 | 75.6 | C 0.42 | 0.42 | 0.0 | 0.57 | 0.57 | 0.0 | C | 29.52 | 29.52 | 2.00 |
| | 1 | 0 | 2 | 4.9 | 0.07 | 0.07 | 0.0 | 0.15 | 0.15 | 0.0 | | 30.00 | 30.00 | 2.00 |
| | 4 | 0 | 5 | 12.2 | -0.33 | -0.33 | 0.0 | -0.53 | -0.53 | 0.0 | | 21.40 | 21.40 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

LERIAP 2.0

SUMMARY ITEM STATISTICS

TEST NO 1 CTBS,POST-EXP

SUBTEST 1 READING

ITEM NUMBER 21

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 14.6 | -0.05 | -0.05 | 0.0 | -0.07 | -0.07 | 0.0 | | 27.00 | 27.00 | 2.00 |
| 2 | 0 | 6 | 14.6 | -0.39 | -0.39 | 0.0 | -0.60 | -0.60 | 0.0 | | 21.00 | 21.00 | 2.00 |
| 3 | 0 | 11 | 26.8 | -0.18 | -0.18 | 0.0 | -0.24 | -0.24 | 0.0 | | 25.64 | 25.64 | 2.00 |
| C 4 | 1 | 17 | 41.5 | C 0.54 | 0.54 | 0.0 | 0.69 | 0.69 | 0.0 | C | 32.47 | 32.47 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.21 | -0.21 | 0.0 | -0.58 | -0.58 | 0.0 | | 18.00 | 18.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 22

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | -0.12 | -0.12 | 0.0 | -0.20 | -0.20 | 0.0 | | 25.25 | 25.25 | 2.00 |
| 2 | 0 | 6 | 14.6 | -0.24 | -0.24 | 0.0 | -0.37 | -0.37 | 0.0 | | 23.67 | 23.67 | 2.00 |
| C 3 | 1 | 25 | 61.0 | C 0.23 | 0.23 | 0.0 | 0.29 | 0.29 | 0.0 | C | 29.12 | 29.12 | 2.00 |
| 4 | 0 | 5 | 12.2 | 0.12 | 0.12 | 0.0 | 0.20 | 0.20 | 0.0 | | 30.20 | 30.20 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.21 | -0.21 | 0.0 | -0.58 | -0.58 | 0.0 | | 18.00 | 18.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 23

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | -0.39 | -0.39 | 0.0 | -0.82 | -0.82 | 0.0 | | 15.50 | 15.50 | 2.00 |
| 2 | 0 | 4 | 9.8 | -0.20 | -0.20 | 0.0 | -0.34 | -0.34 | 0.0 | | 23.50 | 23.50 | 2.00 |
| C 3 | 1 | 28 | 68.3 | C 0.46 | 0.46 | 0.0 | 0.60 | 0.60 | 0.0 | C | 30.07 | 30.07 | 2.00 |
| 4 | 0 | 6 | 14.6 | -0.11 | -0.11 | 0.0 | -0.17 | -0.17 | 0.0 | | 25.83 | 25.83 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.21 | -0.21 | 0.0 | -0.58 | -0.58 | 0.0 | | 18.00 | 18.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 24

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 14.6 | -0.14 | -0.14 | 0.0 | -0.22 | -0.22 | 0.0 | | 25.33 | 25.33 | 2.00 |
| 2 | 0 | 10 | 24.4 | -0.17 | -0.17 | 0.0 | -0.23 | -0.23 | 0.0 | | 25.70 | 25.70 | 2.00 |
| 3 | 0 | 7 | 17.1 | -0.34 | -0.34 | 0.0 | -0.50 | -0.50 | 0.0 | | 22.43 | 22.43 | 2.00 |
| C 4 | 1 | 16 | 39.0 | C 0.64 | 0.64 | 0.0 | 0.82 | 0.82 | 0.0 | C | 33.63 | 33.63 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.31 | -0.31 | 0.0 | -0.65 | -0.65 | 0.0 | | 18.00 | 18.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 CTBS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 25

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | | -0.16 | -0.16 | 0.0 | -0.28 | -0.28 | 0.0 | | 24.25 | 24.25 | 2.00 |
| 2 | 0 | 4 | 9.8 | | -0.12 | -0.12 | 0.0 | -0.20 | -0.20 | 0.0 | | 25.25 | 25.25 | 2.00 |
| 3 | 0 | 3 | 7.3 | | 0.05 | 0.05 | 0.0 | 0.09 | 0.09 | 0.0 | | 29.00 | 29.00 | 2.00 |
| C 4 | 1 | 27 | 65.9 | C | 0.42 | 0.42 | 0.0 | 0.54 | 0.54 | 0.0 | C | 30.00 | 30.00 | 2.00 |
| OTHER | 0 | 3 | 7.3 | | -0.50 | -0.50 | 0.0 | -0.93 | -0.93 | 0.0 | | 15.00 | 15.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 26

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | | -0.24 | -0.24 | 0.0 | -0.52 | -0.52 | 0.0 | | 20.00 | 20.00 | 2.00 |
| 2 | 0 | 5 | 12.2 | | 0.04 | 0.04 | 0.0 | 0.07 | 0.07 | 0.0 | | 28.60 | 28.60 | 2.00 |
| C 3 | 1 | 29 | 70.7 | C | 0.38 | 0.38 | 0.0 | 0.50 | 0.50 | 0.0 | C | 29.55 | 29.55 | 2.00 |
| 4 | 0 | 3 | 7.3 | | -0.12 | -0.12 | 0.0 | -0.23 | -0.23 | 0.0 | | 24.67 | 24.67 | 2.00 |
| OTHER | 0 | 2 | 4.9 | | -0.46 | -0.46 | 0.0 | -0.99 | -0.99 | 0.0 | | 13.00 | 13.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 27

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 38 | 92.7 | C | 0.38 | 0.38 | 0.0 | 0.66 | 0.66 | 0.0 | C | 28.58 | 28.58 | 2.00 |
| 2 | 0 | 1 | 2.4 | | -0.02 | -0.02 | 0.0 | -0.05 | -0.05 | 0.0 | | 27.00 | 27.00 | 2.00 |
| 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 1 | 2.4 | | -0.19 | -0.19 | 0.0 | -0.52 | -0.52 | 0.0 | | 19.00 | 19.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.43 | -0.43 | 0.0 | -1.17 | -1.17 | 0.0 | | 8.00 | 8.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 28

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 35 | 85.4 | C | 0.11 | 0.11 | 0.0 | 0.17 | 0.17 | 0.0 | C | 28.14 | 28.14 | 2.00 |
| 2 | 0 | 1 | 2.4 | | -0.19 | -0.19 | 0.0 | -0.52 | -0.52 | 0.0 | | 19.00 | 19.00 | 2.00 |
| 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 3 | 7.3 | | 0.23 | 0.23 | 0.0 | 0.43 | 0.43 | 0.0 | | 33.67 | 33.67 | 2.00 |
| OTHER | 0 | 2 | 4.9 | | -0.32 | -0.32 | 0.0 | -0.69 | -0.69 | 0.0 | | 17.50 | 17.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTBS, POST-EXP SUBTEST 1 READING

ITEM NUMBER 29

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 14.6 | -0.25 | -0.25 | 0.0 | -0.38 | -0.38 | 0.0 | | 23.50 | 23.50 | 2.00 |
| 2 | 0 | 4 | 9.8 | -0.13 | -0.13 | 0.0 | -0.22 | -0.22 | 0.0 | | 25.00 | 25.00 | 2.00 |
| C 3 | 1 | 30 | 73.2 | C 0.43 | 0.43 | 0.0 | 0.58 | 0.58 | 0.0 | C | 29.70 | 29.70 | 2.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| OTHER | 0 | 1 | 2.4 | -0.43 | -0.43 | 0.0 | -1.17 | -1.17 | 0.0 | | 8.00 | 8.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 30

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.06 | -0.06 | 0.0 | -0.10 | -0.10 | 0.0 | | 26.60 | 26.60 | 2.00 |
| 2 | 0 | 13 | 31.7 | -0.34 | -0.34 | 0.0 | -0.45 | -0.45 | 0.0 | | 24.15 | 24.15 | 2.00 |
| 3 | 0 | 1 | 2.4 | 0.03 | 0.03 | 0.0 | 0.07 | 0.07 | 0.0 | | 29.00 | 29.00 | 2.00 |
| C 4 | 1 | 20 | 48.8 | C 0.49 | 0.49 | 0.0 | 0.62 | 0.62 | 0.0 | C | 31.45 | 31.45 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.32 | -0.32 | 0.0 | -0.69 | -0.69 | 0.0 | | 17.50 | 17.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 31

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.13 | -0.13 | 0.0 | -0.34 | -0.34 | 0.0 | | 22.00 | 22.00 | 2.00 |
| 2 | 0 | 9 | 22.0 | 0.01 | 0.01 | 0.0 | 0.01 | 0.01 | 0.0 | | 27.89 | 27.89 | 2.00 |
| C 3 | 1 | 18 | 43.9 | C 0.36 | 0.36 | 0.0 | 0.45 | 0.45 | 0.0 | C | 30.72 | 30.72 | 2.00 |
| 4 | 0 | 11 | 26.8 | -0.20 | -0.20 | 0.0 | -0.27 | -0.27 | 0.0 | | 25.36 | 25.36 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.32 | -0.32 | 0.0 | -0.69 | -0.69 | 0.0 | | 17.50 | 17.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 32

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.11 | -0.11 | 0.0 | -0.18 | -0.18 | 0.0 | | 25.60 | 25.60 | 2.00 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 3 | 0 | 11 | 26.8 | -0.19 | -0.19 | 0.0 | -0.25 | -0.25 | 0.0 | | 25.55 | 25.55 | 2.00 |
| C 4 | 1 | 24 | 58.5 | C 0.38 | 0.38 | 0.0 | 0.48 | 0.48 | 0.0 | C | 30.13 | 30.13 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.43 | -0.43 | 0.0 | -1.17 | -1.17 | 0.0 | | 8.00 | 8.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CIDS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 33

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | COEFFICIENTS OF CORRELATION | | | | | | | | | MEANS | | |
| C 1 | 1 | 16 | 39.0 | C | 0.04 | 0.04 | 0.0 | 0.05 | 0.05 | 0.0 | C | 28.13 | 28.13 | 2.00 |
| 2 | 0 | 21 | 51.2 | | 0.22 | 0.22 | 0.0 | 0.27 | 0.27 | 0.0 | | 29.33 | 29.33 | 2.00 |
| 3 | 0 | 3 | 7.3 | | -0.23 | -0.23 | 0.0 | -0.42 | -0.42 | 0.0 | | 22.00 | 22.00 | 2.00 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| OTHER | 0 | 1 | 2.4 | | -0.43 | -0.43 | 0.0 | -1.17 | -1.17 | 0.0 | | 8.00 | 8.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 34

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | COEFFICIENTS OF CORRELATION | | | | | | | | | MEANS | | |
| C 1 | 1 | 26 | 63.4 | C | 0.39 | 0.39 | 0.0 | 0.50 | 0.50 | 0.0 | C | 29.96 | 29.96 | 2.00 |
| 2 | 0 | 4 | 9.8 | | -0.22 | -0.22 | 0.0 | -0.38 | -0.38 | 0.0 | | 23.00 | 23.00 | 2.00 |
| 3 | 0 | 2 | 4.9 | | -0.06 | -0.06 | 0.0 | -0.12 | -0.12 | 0.0 | | 26.00 | 26.00 | 2.00 |
| 4 | 0 | 7 | 17.1 | | -0.06 | -0.06 | 0.0 | -0.09 | -0.09 | 0.0 | | 26.86 | 26.86 | 2.00 |
| OTHER | 0 | 2 | 4.9 | | -0.42 | -0.42 | 0.0 | -0.89 | -0.89 | 0.0 | | 14.50 | 14.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 35

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | COEFFICIENTS OF CORRELATION | | | | | | | | | MEANS | | |
| 1 | 0 | 1 | 2.4 | | -0.21 | -0.21 | 0.0 | -0.58 | -0.58 | 0.0 | | 18.00 | 18.00 | 2.00 |
| C 2 | 1 | 28 | 68.3 | C | 0.41 | 0.41 | 0.0 | 0.53 | 0.53 | 0.0 | C | 29.82 | 29.82 | 2.00 |
| 3 | 0 | 3 | 7.3 | | -0.19 | -0.19 | 0.0 | -0.35 | -0.35 | 0.0 | | 23.00 | 23.00 | 2.00 |
| 4 | 0 | 7 | 17.1 | | -0.05 | -0.05 | 0.0 | -0.07 | -0.07 | 0.0 | | 27.00 | 27.00 | 2.00 |
| OTHER | 0 | 2 | 4.9 | | -0.42 | -0.42 | 0.0 | -0.89 | -0.89 | 0.0 | | 14.50 | 14.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 36

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | COEFFICIENTS OF CORRELATION | | | | | | | | | MEANS | | |
| 1 | 0 | 8 | 19.5 | | 0.10 | 0.10 | 0.0 | 0.14 | 0.14 | 0.0 | | 29.25 | 29.25 | 2.00 |
| 2 | 0 | 3 | 7.3 | | -0.23 | -0.23 | 0.0 | -0.42 | -0.42 | 0.0 | | 22.00 | 22.00 | 2.00 |
| C 3 | 1 | 17 | 41.5 | C | 0.32 | 0.32 | 0.0 | 0.41 | 0.41 | 0.0 | C | 30.59 | 30.59 | 2.00 |
| 4 | 0 | 10 | 24.4 | | -0.08 | -0.08 | 0.0 | -0.11 | -0.11 | 0.0 | | 26.80 | 26.80 | 2.00 |
| OTHER | 0 | 3 | 7.3 | | -0.41 | -0.41 | 0.0 | -0.76 | -0.76 | 0.0 | | 17.33 | 17.33 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

LERTAP 2.0 SUMMARY ITEM STATISTICS

TEST NO 1 CTBS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 37

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | COEFFICIENTS OF CORRELATION ST | TT | EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | 0.05 | 0.05 | 0.0 | 0.08 | 0.08 | 0.0 | | 28.80 | 28.80 | 2.00 | | | |
| C 2 | 1 | 27 | 65.9 | C 0.36 | 0.36 | 0.0 | 0.47 | 0.47 | 0.0 | C | 29.70 | 29.70 | 2.00 | | | |
| 3 | 0 | 2 | 4.9 | -0.12 | -0.12 | 0.0 | -0.25 | -0.25 | 0.0 | | 24.00 | 24.00 | 2.00 | | | |
| 4 | 0 | 3 | 7.3 | -0.19 | -0.19 | 0.0 | -0.35 | -0.35 | 0.0 | | 23.00 | 23.00 | 2.00 | | | |
| OTHER | 0 | 4 | 9.8 | -0.39 | -0.39 | 0.0 | -0.67 | -0.67 | 0.0 | | 19.25 | 19.25 | 2.00 | | | |
| TOTAL | | 41 | | | | | | | | | | | | | | |

ITEM NUMBER 38

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | COEFFICIENTS OF CORRELATION ST | TT | EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 17.00 | 17.00 | 2.00 | | | |
| C 2 | 1 | 11 | 26.8 | C 0.52 | 0.52 | 0.0 | 0.70 | 0.70 | 0.0 | C | 34.00 | 34.00 | 2.00 | | | |
| 3 | 0 | 4 | 9.8 | -0.24 | -0.24 | 0.0 | -0.42 | -0.42 | 0.0 | | 22.50 | 22.50 | 2.00 | | | |
| 4 | 0 | 21 | 51.2 | -0.01 | -0.01 | 0.0 | -0.02 | -0.02 | 0.0 | | 27.71 | 27.71 | 2.00 | | | |
| OTHER | 0 | 4 | 9.8 | -0.39 | -0.39 | 0.0 | -0.67 | -0.67 | 0.0 | | 19.25 | 19.25 | 2.00 | | | |
| TOTAL | | 41 | | | | | | | | | | | | | | |

ITEM NUMBER 39

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | COEFFICIENTS OF CORRELATION ST | TT | EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 7.3 | -0.17 | -0.17 | 0.0 | -0.33 | -0.33 | 0.0 | | 23.33 | 23.33 | 2.00 | | | |
| 2 | 0 | 4 | 9.8 | 0.08 | 0.08 | 0.0 | 0.13 | 0.13 | 0.0 | | 29.50 | 29.50 | 2.00 | | | |
| 3 | 0 | 7 | 17.1 | -0.29 | -0.29 | 0.0 | -0.43 | -0.43 | 0.0 | | 23.14 | 23.14 | 2.00 | | | |
| C 4 | 1 | 23 | 56.1 | C 0.50 | 0.50 | 0.0 | 0.63 | 0.63 | 0.0 | C | 31.00 | 31.00 | 2.00 | | | |
| OTHER | 0 | 4 | 9.8 | -0.39 | -0.39 | 0.0 | -0.67 | -0.67 | 0.0 | | 19.25 | 19.25 | 2.00 | | | |
| TOTAL | | 41 | | | | | | | | | | | | | | |

ITEM NUMBER 40

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | COEFFICIENTS OF CORRELATION ST | TT | EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 6 | 14.6 | 0.05 | 0.05 | 0.0 | 0.08 | 0.08 | 0.0 | | 28.67 | 28.67 | 2.00 | | | |
| C 2 | 1 | 22 | 53.7 | C 0.39 | 0.39 | 0.0 | 0.50 | 0.50 | 0.0 | C | 30.45 | 30.45 | 2.00 | | | |
| 3 | 0 | 7 | 17.1 | -0.22 | -0.22 | 0.0 | -0.33 | -0.33 | 0.0 | | 24.29 | 24.29 | 2.00 | | | |
| 4 | 0 | 1 | 2.4 | -0.06 | -0.06 | 0.0 | -0.17 | -0.17 | 0.0 | | 25.00 | 25.00 | 2.00 | | | |
| OTHER | 0 | 5 | 12.2 | -0.37 | -0.37 | 0.0 | -0.60 | -0.60 | 0.0 | | 20.60 | 20.60 | 2.00 | | | |
| TOTAL | | 41 | | | | | | | | | | | | | | |

TEST NO 1 CIBS,POST-EXP SUBTEST 1 READING

ITEM NUMBER 41

| | | | | | | | | | | COEFFICIENTS OF CORRELATION | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| | 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | 2 | 0 | 4 | 9.8 | | 0.19 | 0.19 | 0.0 | 0.33 | 0.33 | 0.0 | | 32.00 | 32.00 | 2.00 |
| | 3 | 0 | 4 | 9.8 | | -0.18 | -0.18 | 0.0 | -0.32 | -0.32 | 0.0 | | 23.75 | 23.75 | 2.00 |
| C | 4 | 1 | 28 | 68.3 | C | 0.34 | 0.34 | 0.0 | 0.44 | 0.44 | 0.0 | C | 29.46 | 29.46 | 2.00 |
| | OTHER | 0 | 5 | 12.2 | | -0.49 | -0.49 | 0.0 | -0.78 | -0.78 | 0.0 | | 18.40 | 18.40 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 42

| | | | | | | | | | | COEFFICIENTS OF CORRELATION | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| | 1 | 0 | 6 | 14.6 | | -0.13 | -0.13 | 0.0 | -0.20 | -0.20 | 0.0 | | 25.50 | 25.50 | 2.00 |
| | 2 | 0 | 3 | 7.3 | | 0.09 | 0.09 | 0.0 | 0.16 | 0.16 | 0.0 | | 30.00 | 30.00 | 2.00 |
| C | 3 | 1 | 25 | 61.0 | C | 0.42 | 0.42 | 0.0 | 0.54 | 0.54 | 0.0 | C | 30.24 | 30.24 | 2.00 |
| | 4 | 0 | 2 | 4.9 | | -0.10 | -0.10 | 0.0 | -0.22 | -0.22 | 0.0 | | 24.50 | 24.50 | 2.00 |
| | OTHER | 0 | 5 | 12.2 | | -0.49 | -0.49 | 0.0 | -0.78 | -0.78 | 0.0 | | 18.40 | 18.40 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 43

| | | | | | | | | | | COEFFICIENTS OF CORRELATION | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| | 1 | 0 | 2 | 4.9 | | -0.15 | -0.15 | 0.0 | -0.32 | -0.32 | 0.0 | | 23.00 | 23.00 | 2.00 |
| C | 2 | 1 | 14 | 34.1 | C | 0.16 | 0.16 | 0.0 | 0.21 | 0.21 | 0.0 | C | 29.43 | 29.43 | 2.00 |
| | 3 | 0 | 9 | 22.0 | | -0.09 | -0.09 | 0.0 | -0.13 | -0.13 | 0.0 | | 26.56 | 26.56 | 2.00 |
| | 4 | 0 | 10 | 24.4 | | 0.35 | 0.35 | 0.0 | 0.47 | 0.47 | 0.0 | | 32.20 | 32.20 | 2.00 |
| | OTHER | 0 | 6 | 14.6 | | -0.44 | -0.44 | 0.0 | -0.67 | -0.67 | 0.0 | | 20.17 | 20.17 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 44

| | | | | | | | | | | COEFFICIENTS OF CORRELATION | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| | 1 | 0 | 7 | 17.1 | | 0.12 | 0.12 | 0.0 | 0.18 | 0.18 | 0.0 | | 29.71 | 29.71 | 2.00 |
| C | 2 | 1 | 26 | 63.4 | C | 0.18 | 0.18 | 0.0 | 0.23 | 0.23 | 0.0 | C | 28.81 | 28.81 | 2.00 |
| | 3 | 0 | 1 | 2.4 | | 0.14 | 0.14 | 0.0 | 0.37 | 0.37 | 0.0 | | 34.00 | 34.00 | 2.00 |
| | 4 | 0 | 2 | 4.9 | | 0.02 | 0.02 | 0.0 | 0.05 | 0.05 | 0.0 | | 28.50 | 28.50 | 2.00 |
| | OTHER | 0 | 5 | 12.2 | | -0.49 | -0.49 | 0.0 | -0.78 | -0.78 | 0.0 | | 18.40 | 18.40 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 Class,POST-EXP SUBTEST 1 READING

ITEM NUMBER 45

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
| 1 | 0 | 1 | 2.4 | | 0.14 | 0.14 | 0.0 | 0.37 | 0.37 | 0.0 | | 34.00 | 34.00 | 2.00 |
| C 2 | 1 | 28 | 68.3 | C | 0.45 | 0.45 | 0.0 | 0.58 | 0.58 | 0.0 | C | 30.00 | 30.00 | 2.00 |
| 3 | 0 | 1 | 2.4 | | -0.08 | -0.08 | 0.0 | -0.22 | -0.22 | 0.0 | | 24.00 | 24.00 | 2.00 |
| 4 | 0 | 5 | 12.2 | | -0.17 | -0.17 | 0.0 | -0.27 | -0.27 | 0.0 | | 24.60 | 24.60 | 2.00 |
| OTHER | 0 | 6 | 14.6 | | -0.46 | -0.46 | 0.0 | -0.70 | -0.70 | 0.0 | | 19.83 | 19.83 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CIDS,POST-EXP SUBTEST 1 READING

NUMBER OF INDIVIDUALS = 41.00 NUMBER OF ITEMS = 45.00

MEAN = 27.80 HIGHEST SCORE = 40.00

STANDARD DEVIATION = 7.32 LOWEST SCORE = 8.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 40.00 | 47.57 | 1.19 |
| ITEMS | 44.00 | 41.85 | 0.95 |
| RESIDUAL | 1760.00 | 346.19 | 0.20 |
| TOTAL | 1844.00 | 435.61 | 0.24 |

HOYT ESTIMATE OF RELIABILITY = 0.83

STANDARD ERROR OF MEASUREMENT = 2.94

C T B S

LANGUAGE

TEST NO 1 CTBS,LANGUAGE,EXP. SUBTEST 1

ITEM NUMBER 1

| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 1 | 2.4 | | 0.03 | 0.03 | 0.0 | 0.07 | 0.07 | 0.0 | | 14.00 | 14.00 | 2.00 |
| C | 2 | 1 | 38 | 92.7 | C | 0.07 | 0.07 | 0.0 | 0.12 | 0.12 | 0.0 | C | 13.66 | 13.66 | 2.00 |
| | 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | 4 | 0 | 2 | 4.9 | | -0.10 | -0.10 | 0.0 | -0.22 | -0.22 | 0.0 | | 12.50 | 12.50 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 2

| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 1 | 1 | 29 | 70.7 | C | 0.01 | 0.01 | 0.0 | 0.01 | 0.01 | 0.0 | C | 13.62 | 13.62 | 2.00 |
| | 2 | 0 | 5 | 12.2 | | -0.03 | -0.03 | 0.0 | -0.05 | -0.05 | 0.0 | | 13.40 | 13.40 | 2.00 |
| | 3 | 0 | 1 | 2.4 | | 0.16 | 0.16 | 0.0 | 0.43 | 0.43 | 0.0 | | 16.00 | 16.00 | 2.00 |
| | 4 | 0 | 6 | 14.6 | | -0.05 | -0.05 | 0.0 | -0.07 | -0.07 | 0.0 | | 13.33 | 13.33 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 3

| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 4 | 9.8 | | -0.22 | -0.22 | 0.0 | -0.38 | -0.38 | 0.0 | | 12.00 | 12.00 | 2.00 |
| | 2 | 0 | 3 | 7.3 | | 0.05 | 0.05 | 0.0 | 0.09 | 0.09 | 0.0 | | 14.00 | 14.00 | 2.00 |
| C | 3 | 1 | 24 | 58.5 | C | 0.19 | 0.19 | 0.0 | 0.24 | 0.24 | 0.0 | C | 14.00 | 14.00 | 2.00 |
| | 4 | 0 | 10 | 24.4 | | -0.10 | -0.10 | 0.0 | -0.13 | -0.13 | 0.0 | | 13.20 | 13.20 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 4

| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 1 | 1 | 33 | 80.5 | C | 0.05 | 0.05 | 0.0 | 0.07 | 0.07 | 0.0 | C | 13.67 | 13.67 | 2.00 |
| | 2 | 0 | 6 | 14.6 | | 0.12 | 0.12 | 0.0 | 0.19 | 0.19 | 0.0 | | 14.33 | 14.33 | 2.00 |
| | 3 | 0 | 2 | 4.9 | | -0.29 | -0.29 | 0.0 | -0.63 | -0.63 | 0.0 | | 10.50 | 10.50 | 2.00 |
| | 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| | TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 5

| | OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST MEANS | TT MEANS | EC MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 3 | 7.3 | | 0.12 | 0.12 | 0.0 | 0.23 | 0.23 | 0.0 | | 14.67 | 14.67 | 2.00 |
| | 2 | 0 | 2 | 4.9 | | -0.29 | -0.29 | 0.0 | -0.63 | -0.63 | 0.0 | | 10.50 | 10.50 | 2.00 |
| C | 3 | 1 | 31 | 75.6 | C | 0.19 | 0.19 | 0.0 | 0.26 | 0.26 | 0.0 | C | 13.87 | 13.87 | 2.00 |
| | 4 | 0 | 5 | 12.2 | | -0.16 | -0.16 | 0.0 | -0.25 | -0.25 | 0.0 | | 12.60 | 12.60 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTBS,LANGUAGE,EXP. SUBTEST 1

ITEM NUMBER 6

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 19 | 46.3 | C | 0.25 | 0.25 | 0.0 | 0.32 | 0.32 | 0.0 | C 14.26 | 14.26 | 2.00 |
| 3 | 0 | 10 | 24.4 | | -0.05 | -0.05 | 0.0 | -0.07 | -0.07 | 0.0 | 13.40 | 13.40 | 2.00 |
| 4 | 0 | 12 | 29.3 | | -0.23 | -0.23 | 0.0 | -0.31 | -0.31 | 0.0 | 12.75 | 12.75 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 7

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
| 1 | 0 | 3 | 7.3 | | 0.01 | 0.01 | 0.0 | 0.01 | 0.01 | 0.0 | 13.67 | 13.67 | 2.00 |
| C 2 | 1 | 26 | 63.4 | C | 0.17 | 0.17 | 0.0 | 0.22 | 0.22 | 0.0 | C 13.92 | 13.92 | 2.00 |
| 3 | 0 | 11 | 26.8 | | -0.22 | -0.22 | 0.0 | -0.30 | -0.30 | 0.0 | 12.73 | 12.73 | 2.00 |
| 4 | 0 | 1 | 2.4 | | 0.09 | 0.09 | 0.0 | 0.25 | 0.25 | 0.0 | 15.00 | 15.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 8

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
| C 1 | 1 | 27 | 65.9 | C | 0.20 | 0.20 | 0.0 | 0.26 | 0.26 | 0.0 | C 13.96 | 13.96 | 2.00 |
| 2 | 0 | 8 | 19.5 | | 0.05 | 0.05 | 0.0 | 0.08 | 0.08 | 0.0 | 13.88 | 13.88 | 2.00 |
| 3 | 0 | 3 | 7.3 | | -0.27 | -0.27 | 0.0 | -0.50 | -0.50 | 0.0 | 11.33 | 11.33 | 2.00 |
| 4 | 0 | 3 | 7.3 | | -0.19 | -0.19 | 0.0 | -0.35 | -0.35 | 0.0 | 12.00 | 12.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 9

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
| C 1 | 1 | 24 | 58.5 | C | 0.30 | 0.30 | 0.0 | 0.37 | 0.37 | 0.0 | C 14.21 | 14.21 | 2.00 |
| 2 | 0 | 4 | 9.8 | | -0.22 | -0.22 | 0.0 | -0.38 | -0.38 | 0.0 | 12.00 | 12.00 | 2.00 |
| 3 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 13 | 31.7 | | -0.17 | -0.17 | 0.0 | -0.23 | -0.23 | 0.0 | 13.00 | 13.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 10

| | | | | | COEFFICIENTS OF CORRELATION | | | | | | MEANS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | ST | TT | EC |
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 2 | 4.9 | | 0.08 | 0.08 | 0.0 | 0.08 | 0.08 | 0.0 | 14.00 | 14.00 | 2.00 |
| C 3 | 1 | 36 | 87.8 | C | -0.03 | -0.03 | 0.0 | -0.05 | -0.05 | 0.0 | C 13.58 | 13.58 | 2.00 |
| 4 | 0 | 3 | 7.3 | | 0.01 | 0.01 | 0.0 | 0.01 | 0.01 | 0.0 | 13.67 | 13.67 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTBS,LANGUAGE,EXP. SUBTEST 1

ITEM NUMBER 11

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 5 | 12.2 | -0.06 | -0.06 | 0.0 | -0.10 | -0.10 | 0.0 | | 13.20 | 13.20 | 2.00 |
| C 3 | 1 | 15 | 36.6 | C 0.21 | 0.21 | 0.0 | 0.27 | 0.27 | 0.0 | C | 14.27 | 14.27 | 2.00 |
| 4 | 0 | 21 | 51.2 | -0.16 | -0.16 | 0.0 | -0.20 | -0.20 | 0.0 | | 13.24 | 13.24 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 12

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 26 | 63.4 | C 0.45 | 0.45 | 0.0 | 0.57 | 0.57 | 0.0 | C | 14.42 | 14.42 | 2.00 |
| 2 | 0 | 8 | 19.5 | -0.23 | -0.23 | 0.0 | -0.33 | -0.33 | 0.0 | | 12.50 | 12.50 | 2.00 |
| 3 | 0 | 1 | 2.4 | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 10.00 | 10.00 | 2.00 |
| 4 | 0 | 6 | 14.6 | -0.25 | -0.25 | 0.0 | -0.38 | -0.38 | 0.0 | | 12.17 | 12.17 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 13

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 10.00 | 10.00 | 2.00 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 3 | 0 | 6 | 14.6 | -0.45 | -0.45 | 0.0 | -0.69 | -0.69 | 0.0 | | 11.00 | 11.00 | 2.00 |
| C 4 | 1 | 34 | 82.9 | C 0.52 | 0.52 | 0.0 | 0.76 | 0.76 | 0.0 | C | 14.18 | 14.18 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 14

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 36 | 87.8 | C 0.50 | 0.50 | 0.0 | 0.78 | 0.78 | 0.0 | C | 14.06 | 14.06 | 2.00 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 3 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 4 | 0 | 5 | 12.2 | -0.50 | -0.50 | 0.0 | -0.81 | -0.81 | 0.0 | | 10.40 | 10.40 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 15

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 2.4 | -0.04 | -0.04 | 0.0 | -0.11 | -0.11 | 0.0 | | 13.00 | 13.00 | 2.00 |
| 2 | 0 | 1 | 2.4 | -0.44 | -0.44 | 0.0 | -1.18 | -1.18 | 0.0 | | 7.00 | 7.00 | 2.00 |
| C 3 | 1 | 17 | 41.5 | C 0.59 | 0.59 | 0.0 | 0.75 | 0.75 | 0.0 | C | 15.29 | 15.29 | 2.00 |
| 4 | 0 | 22 | 53.7 | -0.44 | -0.44 | 0.0 | -0.55 | -0.55 | 0.0 | | 12.64 | 12.64 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CIDS,LANGUAGE,EXP. SUBTEST 1

ITEM NUMBER 16

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 2 | 0 | 2 | 4.9 | -0.34 | -0.34 | 0.0 | -0.73 | -0.73 | 0.0 | | 10.00 | 10.00 | 2.00 |
| C 3 | 1 | 34 | 82.9 | C 0.36 | 0.36 | 0.0 | 0.52 | 0.52 | 0.0 | C | 14.00 | 14.00 | 2.00 |
| 4 | 0 | 4 | 9.8 | -0.08 | -0.08 | 0.0 | -0.14 | -0.14 | 0.0 | | 13.00 | 13.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 10.00 | 10.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 17

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 26 | 63.4 | C 0.26 | 0.26 | 0.0 | 0.33 | 0.33 | 0.0 | C | 14.08 | 14.08 | 2.00 |
| 2 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| 3 | 0 | 3 | 7.3 | -0.27 | -0.27 | 0.0 | -0.50 | -0.50 | 0.0 | | 11.33 | 11.33 | 2.00 |
| 4 | 0 | 12 | 29.3 | -0.12 | -0.12 | 0.0 | -0.16 | -0.16 | 0.0 | | 13.17 | 13.17 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 18

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | 0.41 | 0.41 | 0.0 | 0.88 | 0.88 | 0.0 | | 18.00 | 18.00 | 2.00 |
| 2 | 0 | 1 | 2.4 | -0.44 | -0.44 | 0.0 | -1.18 | -1.18 | 0.0 | | 7.00 | 7.00 | 2.00 |
| 3 | 0 | 9 | 22.0 | -0.23 | -0.23 | 0.0 | -0.33 | -0.33 | 0.0 | | 12.56 | 12.56 | 2.00 |
| C 4 | 1 | 28 | 68.3 | C 0.24 | 0.24 | 0.0 | 0.31 | 0.31 | 0.0 | C | 14.00 | 14.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 10.00 | 10.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 19

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 34 | 82.9 | C 0.47 | 0.47 | 0.0 | 0.68 | 0.68 | 0.0 | C | 14.12 | 14.12 | 2.00 |
| 2 | 0 | 1 | 2.4 | -0.44 | -0.44 | 0.0 | -1.18 | -1.18 | 0.0 | | 7.00 | 7.00 | 2.00 |
| 3 | 0 | 1 | 2.4 | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 10.00 | 10.00 | 2.00 |
| 4 | 0 | 5 | 12.2 | -0.22 | -0.22 | 0.0 | -0.35 | -0.35 | 0.0 | | 12.20 | 12.20 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTBS.LANGUAGE.EXP. SUBTEST 1

ITEM NUMBER 20 COEFFICIENTS OF CORRELATION MEANS

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 5 | 12.2 | -0.31 | -0.31 | 0.0 | -0.51 | -0.51 | 0.0 | | 11.60 | 11.60 | 2.00 |
| C | 2 | 1 | 21 | 51.2 | C 0.45 | 0.45 | 0.0 | 0.57 | 0.57 | 0.0 | C | 14.67 | 14.67 | 2.00 |
| | 3 | 0 | 2 | 4.9 | -0.15 | -0.15 | 0.0 | -0.32 | -0.32 | 0.0 | | 12.00 | 12.00 | 2.00 |
| | 4 | 0 | 13 | 31.7 | -0.20 | -0.20 | 0.0 | -0.25 | -0.25 | 0.0 | | 12.92 | 12.92 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTDS.LANGUAGE.EXP. SUBTEST 1

| | | | |
|---|---|---|---|
| NUMBER OF INDIVIDUALS = | 41.00 | NUMBER OF ITEMS = | 20.00 |
| MEAN = | 13.61 | HIGHEST SCORE = | 19.00 |
| STANDARD DEVIATION = | 2.43 | LOWEST SCORE = | 7.00 |

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 40.00 | 11.79 | 0.29 |
| ITEMS | 19.00 | 20.39 | 1.07 |
| RESIDUAL | 760.00 | 146.11 | 0.19 |
| TOTAL | 819.00 | 178.29 | 0.22 |

HOYT ESTIMATE OF RELIABILITY = 0.35

STANDARD ERROR OF MEASUREMENT = 1.91

C T B S

MATH APPLICATIONS

TEST NO 1 CTBS,MATH APP,EXP,ECST SUBTEST 1

ITEM NUMBER 1

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | -0.22 | -0.22 | 0.0 | -0.38 | -0.38 | 0.0 | | 9.75 | 9.75 | 2.00 |
| 2 | 0 | 9 | 22.0 | -0.15 | -0.15 | 0.0 | -0.21 | -0.21 | 0.0 | | 11.67 | 11.67 | 2.00 |
| C 3 | 1 | 27 | 65.9 | C 0.31 | 0.31 | 0.0 | 0.40 | 0.40 | 0.0 | C | 14.15 | 14.15 | 2.00 |
| 4 | 0 | 1 | 2.4 | -0.13 | -0.13 | 0.0 | -0.35 | -0.35 | 0.0 | | 9.00 | 9.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 2

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.34 | -0.34 | 0.0 | -0.54 | -0.54 | 0.0 | | 8.60 | 8.60 | 2.00 |
| 2 | 0 | 4 | 9.8 | -0.00 | -0.00 | 0.0 | -0.01 | -0.01 | 0.0 | | 13.00 | 13.00 | 2.00 |
| 3 | 0 | 4 | 9.8 | -0.20 | -0.20 | 0.0 | -0.35 | -0.35 | 0.0 | | 10.00 | 10.00 | 2.00 |
| C 4 | 1 | 26 | 63.4 | C 0.39 | 0.39 | 0.0 | 0.50 | 0.50 | 0.0 | C | 14.50 | 14.50 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.07 | -0.07 | 0.0 | -0.15 | -0.15 | 0.0 | | 11.50 | 11.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 3

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 22.0 | -0.30 | -0.30 | 0.0 | -0.43 | -0.43 | 0.0 | | 10.22 | 10.22 | 2.00 |
| 2 | 0 | 5 | 12.2 | -0.40 | -0.40 | 0.0 | -0.64 | -0.64 | 0.0 | | 7.80 | 7.80 | 2.00 |
| 3 | 0 | 3 | 7.3 | -0.02 | -0.02 | 0.0 | -0.04 | -0.04 | 0.0 | | 12.67 | 12.67 | 2.00 |
| C 4 | 1 | 24 | 58.5 | C 0.53 | 0.53 | 0.0 | 0.67 | 0.67 | 0.0 | C | 15.25 | 15.25 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 4

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 19.5 | -0.03 | -0.03 | 0.0 | -0.04 | -0.04 | 0.0 | | 12.75 | 12.75 | 2.00 |
| C 2 | 1 | 19 | 46.3 | C 0.49 | 0.49 | 0.0 | 0.61 | 0.61 | 0.0 | C | 15.63 | 15.63 | 2.00 |
| 3 | 0 | 10 | 24.4 | -0.25 | -0.25 | 0.0 | -0.34 | -0.34 | 0.0 | | 10.90 | 10.90 | 2.00 |
| 4 | 0 | 2 | 4.9 | -0.19 | -0.19 | 0.0 | -0.40 | -0.40 | 0.0 | | 9.00 | 9.00 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.39 | -0.39 | 0.0 | -0.84 | -0.84 | 0.0 | | 4.50 | 4.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTBS,MATH APP,EXP,COST SUBTEST 1

ITEM NUMBER 5

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 9 | 22.0 | 0.03 | 0.03 | 0.0 | 0.04 | 0.04 | 0.0 | | 13.33 | 13.33 | 2.00 |
| C 2 | 1 | 20 | 48.8 | C 0.22 | 0.22 | 0.0 | 0.27 | 0.27 | 0.0 | C | 14.15 | 14.15 | 2.00 |
| 3 | 0 | 7 | 17.1 | -0.11 | -0.11 | 0.0 | -0.16 | -0.16 | 0.0 | | 11.86 | 11.86 | 2.00 |
| 4 | 0 | 3 | 7.3 | -0.15 | -0.15 | 0.0 | -0.29 | -0.29 | 0.0 | | 10.33 | 10.33 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.19 | -0.19 | 0.0 | -0.40 | -0.40 | 0.0 | | 9.00 | 9.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 6

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | -0.26 | -0.26 | 0.0 | -0.54 | -0.54 | 0.0 | | 7.50 | 7.50 | 2.00 |
| C 2 | 1 | 35 | 85.4 | C 0.20 | 0.20 | 0.0 | 0.30 | 0.30 | 0.0 | C | 13.46 | 13.46 | 2.00 |
| 3 | 0 | 3 | 7.3 | -0.12 | -0.12 | 0.0 | -0.22 | -0.22 | 0.0 | | 11.00 | 11.00 | 2.00 |
| 4 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| OTHER | 0 | 1 | 2.4 | 0.09 | 0.09 | 0.0 | 0.26 | 0.26 | 0.0 | | 16.00 | 16.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 7

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 10 | 24.4 | -0.13 | -0.13 | 0.0 | -0.18 | -0.18 | 0.0 | | 11.90 | 11.90 | 2.00 |
| C 2 | 1 | 14 | 34.1 | C 0.37 | 0.37 | 0.0 | 0.48 | 0.48 | 0.0 | C | 15.57 | 15.57 | 2.00 |
| 3 | 0 | 9 | 22.0 | -0.10 | -0.10 | 0.0 | -0.14 | -0.14 | 0.0 | | 12.11 | 12.11 | 2.00 |
| 4 | 0 | 6 | 14.6 | -0.10 | -0.10 | 0.0 | -0.16 | -0.16 | 0.0 | | 11.83 | 11.83 | 2.00 |
| OTHER | 0 | 2 | 4.9 | -0.19 | -0.19 | 0.0 | -0.40 | -0.40 | 0.0 | | 9.00 | 9.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 8

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.29 | -0.29 | 0.0 | -0.47 | -0.47 | 0.0 | | 9.20 | 9.20 | 2.00 |
| 2 | 0 | 9 | 22.0 | -0.24 | -0.24 | 0.0 | -0.34 | -0.34 | 0.0 | | 10.78 | 10.78 | 2.00 |
| C 3 | 1 | 21 | 51.2 | C 0.56 | 0.56 | 0.0 | 0.71 | 0.71 | 0.0 | C | 15.76 | 15.76 | 2.00 |
| 4 | 0 | 3 | 7.3 | 0.05 | 0.05 | 0.0 | 0.10 | 0.10 | 0.0 | | 14.00 | 14.00 | 2.00 |
| OTHER | 0 | 3 | 7.3 | -0.38 | -0.38 | 0.0 | -0.72 | -0.72 | 0.0 | | 6.33 | 6.33 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTBS,MATH APP,EXP,POST SUBTEST 1

ITEM NUMBER 9

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | ST | TT | EC | MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | -0.05 | -0.05 | 0.0 | -0.10 | -0.10 | 0.0 | | 12.00 | 12.00 | 2.00 | |
| 2 | 0 | 3 | 7.3 | -0.35 | -0.35 | 0.0 | -0.65 | -0.65 | 0.0 | | 7.00 | 7.00 | 2.00 | |
| 3 | 0 | 1 | 2.4 | -0.03 | -0.03 | 0.0 | -0.09 | -0.09 | 0.0 | | 12.00 | 12.00 | 2.00 | |
| C 4 | 1 | 34 | 82.9 | C 0.43 | 0.43 | 0.0 | 0.62 | 0.62 | 0.0 | C | 14.00 | 14.00 | 2.00 | |
| OTHER | 0 | 1 | 2.4 | -0.35 | -0.35 | 0.0 | -0.96 | -0.96 | 0.0 | | 2.00 | 2.00 | 2.00 | |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 10

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | ST | TT | EC | MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | -0.26 | -0.26 | 0.0 | -0.54 | -0.54 | 0.0 | | 7.50 | 7.50 | 2.00 | |
| 2 | 0 | 5 | 12.2 | -0.29 | -0.29 | 0.0 | -0.47 | -0.47 | 0.0 | | 9.20 | 9.20 | 2.00 | |
| 3 | 0 | 9 | 22.0 | -0.14 | -0.14 | 0.0 | -0.19 | -0.19 | 0.0 | | 11.78 | 11.78 | 2.00 | |
| C 4 | 1 | 23 | 56.1 | C 0.51 | 0.51 | 0.0 | 0.64 | 0.64 | 0.0 | C | 15.26 | 15.26 | 2.00 | |
| OTHER | 0 | 2 | 4.9 | -0.21 | -0.21 | 0.0 | -0.45 | -0.45 | 0.0 | | 8.50 | 8.50 | 2.00 | |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 11

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | ST | TT | EC | MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 14 | 34.1 | -0.07 | -0.07 | 0.0 | -0.09 | -0.09 | 0.0 | | 12.57 | 12.57 | 2.00 | |
| C 2 | 1 | 16 | 39.0 | C 0.39 | 0.39 | 0.0 | 0.49 | 0.49 | 0.0 | C | 15.44 | 15.44 | 2.00 | |
| 3 | 0 | 4 | 9.8 | -0.30 | -0.30 | 0.0 | -0.52 | -0.52 | 0.0 | | 8.50 | 8.50 | 2.00 | |
| 4 | 0 | 5 | 12.2 | -0.06 | -0.06 | 0.0 | -0.10 | -0.10 | 0.0 | | 12.20 | 12.20 | 2.00 | |
| OTHER | 0 | 2 | 4.9 | -0.21 | -0.21 | 0.0 | -0.45 | -0.45 | 0.0 | | 8.50 | 8.50 | 2.00 | |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 12

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | COEFFICIENTS OF CORRELATION | ST | TT | EC | MEANS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.17 | -0.17 | 0.0 | -0.28 | -0.28 | 0.0 | | 10.80 | 10.80 | 2.00 | |
| 2 | 0 | 7 | 17.1 | -0.12 | -0.12 | 0.0 | -0.18 | -0.18 | 0.0 | | 11.71 | 11.71 | 2.00 | |
| C 3 | 1 | 23 | 56.1 | C 0.51 | 0.51 | 0.0 | 0.64 | 0.64 | 0.0 | C | 15.26 | 15.26 | 2.00 | |
| 4 | 0 | 4 | 9.8 | -0.17 | -0.17 | 0.0 | -0.29 | -0.29 | 0.0 | | 10.50 | 10.50 | 2.00 | |
| OTHER | 0 | 2 | 4.9 | -0.46 | -0.46 | 0.0 | -0.99 | -0.99 | 0.0 | | 3.00 | 3.00 | 2.00 | |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTBS,MATH APP,EXP,1CST SUBTEST 1

ITEM NUMBER 13 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | | -0.00 | -0.00 | 0.0 | -0.01 | -0.01 | 0.0 | | 13.00 | 13.00 | 2.00 |
| 2 | 0 | 4 | 9.8 | | -0.22 | -0.22 | 0.0 | -0.38 | -0.38 | 0.0 | | 9.75 | 9.75 | 2.00 |
| 3 | 0 | 7 | 17.1 | | -0.18 | -0.18 | 0.0 | -0.26 | -0.26 | 0.0 | | 11.14 | 11.14 | 2.00 |
| C 4 | 1 | 21 | 51.2 | C | 0.53 | 0.53 | 0.0 | 0.66 | 0.66 | 0.0 | C | 15.57 | 15.57 | 2.00 |
| OTHER | 0 | 4 | 9.8 | | -0.44 | -0.44 | 0.0 | -0.75 | -0.75 | 0.0 | | 6.50 | 6.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 14 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | | 0.16 | 0.16 | 0.0 | 0.34 | 0.34 | 0.0 | | 16.50 | 16.50 | 2.00 |
| C 2 | 1 | 25 | 61.0 | C | 0.40 | 0.40 | 0.0 | 0.51 | 0.51 | 0.0 | C | 14.64 | 14.64 | 2.00 |
| 3 | 0 | 9 | 22.0 | | -0.09 | -0.09 | 0.0 | -0.12 | -0.12 | 0.0 | | 12.22 | 12.22 | 2.00 |
| 4 | 0 | 2 | 4.9 | | -0.30 | -0.30 | 0.0 | -0.64 | -0.64 | 0.0 | | 6.50 | 6.50 | 2.00 |
| OTHER | 0 | 3 | 7.3 | | -0.50 | -0.50 | 0.0 | -0.93 | -0.93 | 0.0 | | 4.33 | 4.33 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 15 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | | -0.09 | -0.09 | 0.0 | -0.20 | -0.20 | 0.0 | | 11.00 | 11.00 | 2.00 |
| C 2 | 1 | 22 | 53.7 | C | 0.52 | 0.52 | 0.0 | 0.65 | 0.65 | 0.0 | C | 15.41 | 15.41 | 2.00 |
| 3 | 0 | 6 | 14.6 | | -0.24 | -0.24 | 0.0 | -0.37 | -0.37 | 0.0 | | 10.17 | 10.17 | 2.00 |
| 4 | 0 | 6 | 14.6 | | -0.10 | -0.10 | 0.0 | -0.16 | -0.16 | 0.0 | | 11.83 | 11.83 | 2.00 |
| OTHER | 0 | 5 | 12.2 | | -0.35 | -0.35 | 0.0 | -0.57 | -0.57 | 0.0 | | 8.40 | 8.40 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 16 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | | -0.09 | -0.09 | 0.0 | -0.15 | -0.15 | 0.0 | | 11.75 | 11.75 | 2.00 |
| 2 | 0 | 5 | 12.2 | | -0.35 | -0.35 | 0.0 | -0.57 | -0.57 | 0.0 | | 8.40 | 8.40 | 2.00 |
| C 3 | 1 | 27 | 65.9 | C | 0.56 | 0.56 | 0.0 | 0.72 | 0.72 | 0.0 | C | 15.04 | 15.04 | 2.00 |
| 4 | 0 | 2 | 4.9 | | 0.02 | 0.02 | 0.0 | 0.04 | 0.04 | 0.0 | | 13.50 | 13.50 | 2.00 |
| OTHER | 0 | 3 | 7.3 | | -0.50 | -0.50 | 0.0 | -0.93 | -0.93 | 0.0 | | 4.33 | 4.33 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTBS,MATH APP,EXP,POST SUBTEST 1

ITEM NUMBER 17 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 23 | 56.1 | C 0.55 | 0.55 | 0.0 | 0.69 | 0.69 | 0.0 | C | 15.43 | 15.43 | 2.00 |
| 2 | 0 | 9 | 22.0 | -0.11 | -0.11 | 0.0 | -0.16 | -0.16 | 0.0 | | 12.00 | 12.00 | 2.00 |
| 3 | 0 | 5 | 12.2 | -0.25 | -0.25 | 0.0 | -0.40 | -0.40 | 0.0 | | 9.80 | 9.80 | 2.00 |
| 4 | 0 | 1 | 2.4 | -0.10 | -0.10 | 0.0 | -0.26 | -0.26 | 0.0 | | 10.00 | 10.00 | 2.00 |
| OTHER | 0 | 3 | 7.3 | -0.50 | -0.50 | 0.0 | -0.93 | -0.93 | 0.0 | | 4.33 | 4.33 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 18 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | -0.17 | -0.17 | 0.0 | -0.29 | -0.29 | 0.0 | | 10.50 | 10.50 | 2.00 |
| 2 | 0 | 19 | 46.3 | 0.01 | 0.01 | 0.0 | 0.01 | 0.01 | 0.0 | | 13.11 | 13.11 | 2.00 |
| C 3 | 1 | 13 | 31.7 | C 0.37 | 0.37 | 0.0 | 0.48 | 0.48 | 0.0 | C | 15.69 | 15.69 | 2.00 |
| 4 | 0 | 1 | 2.4 | 0.09 | 0.09 | 0.0 | 0.26 | 0.26 | 0.0 | | 16.00 | 16.00 | 2.00 |
| OTHER | 0 | 4 | 9.8 | -0.47 | -0.47 | 0.0 | -0.81 | -0.81 | 0.0 | | 6.00 | 6.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 19 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.20 | -0.20 | 0.0 | -0.32 | -0.32 | 0.0 | | 10.40 | 10.40 | 2.00 |
| C 2 | 1 | 21 | 51.2 | C 0.38 | 0.38 | 0.0 | 0.47 | 0.47 | 0.0 | C | 14.86 | 14.86 | 2.00 |
| 3 | 0 | 9 | 22.0 | -0.01 | -0.01 | 0.0 | -0.01 | -0.01 | 0.0 | | 13.00 | 13.00 | 2.00 |
| 4 | 0 | 2 | 4.9 | 0.04 | 0.04 | 0.0 | 0.09 | 0.09 | 0.0 | | 14.00 | 14.00 | 2.00 |
| OTHER | 0 | 4 | 9.8 | -0.44 | -0.44 | 0.0 | -0.75 | -0.75 | 0.0 | | 6.50 | 6.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 20 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 31 | 75.6 | C 0.69 | 0.69 | 0.0 | 0.93 | 0.93 | 0.0 | C | 14.97 | 14.97 | 2.00 |
| 3 | 0 | 2 | 4.9 | -0.26 | -0.26 | 0.0 | -0.54 | -0.54 | 0.0 | | 7.50 | 7.50 | 2.00 |
| 4 | 0 | 5 | 12.2 | -0.40 | -0.40 | 0.0 | -0.64 | -0.64 | 0.0 | | 7.80 | 7.80 | 2.00 |
| OTHER | 0 | 3 | 7.3 | -0.42 | -0.42 | 0.0 | -0.79 | -0.79 | 0.0 | | 5.67 | 5.67 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

TEST NO 1 CTBS,MATH APP,EXP,COST SUBTEST 1

ITEM NUMBER 21

| OPTION | WT | N | P | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | 0.13 | 0.13 | 0.0 | 0.21 | 0.21 | 0.0 | 14.80 | 14.80 | 2.00 |
| 2 | 0 | 17 | 41.5 | 0.03 | 0.03 | 0.0 | 0.04 | 0.04 | 0.0 | 13.24 | 13.24 | 2.00 |
| C 3 | 1 | 11 | 26.8 C | 0.13 | 0.13 | 0.0 | 0.17 | 0.17 | 0.0 C | 14.09 | 14.09 | 2.00 |
| 4 | 0 | 4 | 9.8 | -0.15 | -0.15 | 0.0 | -0.26 | -0.26 | 0.0 | 10.75 | 10.75 | 2.00 |
| OTHER | 0 | 4 | 9.8 | -0.24 | -0.24 | 0.0 | -0.41 | -0.41 | 0.0 | 9.50 | 9.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

ITEM NUMBER 22

| OPTION | WT | N | P | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | 0.09 | 0.09 | 0.0 | 0.14 | 0.14 | 0.0 | 14.20 | 14.20 | 2.00 |
| 2 | 0 | 5 | 12.2 | -0.25 | -0.25 | 0.0 | -0.40 | -0.40 | 0.0 | 9.80 | 9.80 | 2.00 |
| 3 | 0 | 9 | 22.0 | -0.29 | -0.29 | 0.0 | -0.41 | -0.41 | 0.0 | 10.33 | 10.33 | 2.00 |
| C 4 | 1 | 17 | 41.5 C | 0.61 | 0.61 | 0.0 | 0.76 | 0.76 | 0.0 C | 16.59 | 16.59 | 2.00 |
| OTHER | 0 | 5 | 12.2 | -0.38 | -0.38 | 0.0 | -0.62 | -0.62 | 0.0 | 8.00 | 8.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

ITEM NUMBER 23

| OPTION | WT | N | P | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.29 | -0.29 | 0.0 | -0.47 | -0.47 | 0.0 | 9.20 | 9.20 | 2.00 |
| 2 | 0 | 9 | 22.0 | 0.04 | 0.04 | 0.0 | 0.06 | 0.06 | 0.0 | 13.44 | 13.44 | 2.00 |
| C 3 | 1 | 21 | 51.2 C | 0.46 | 0.46 | 0.0 | 0.57 | 0.57 | 0.0 C | 15.24 | 15.24 | 2.00 |
| 4 | 0 | 2 | 4.9 | -0.16 | -0.16 | 0.0 | -0.35 | -0.35 | 0.0 | 9.50 | 9.50 | 2.00 |
| OTHER | 0 | 4 | 9.8 | -0.39 | -0.39 | 0.0 | -0.67 | -0.67 | 0.0 | 7.25 | 7.25 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

ITEM NUMBER 24

| OPTION | WT | N | P | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | -0.11 | -0.11 | 0.0 | -0.18 | -0.18 | 0.0 | 11.60 | 11.60 | 2.00 |
| C 2 | 1 | 12 | 29.3 C | 0.05 | 0.05 | 0.0 | 0.06 | 0.06 | 0.0 C | 13.42 | 13.42 | 2.00 |
| 3 | 0 | 15 | 36.6 | 0.26 | 0.26 | 0.0 | 0.33 | 0.33 | 0.0 | 14.73 | 14.73 | 2.00 |
| 4 | 0 | 2 | 4.9 | -0.05 | -0.05 | 0.0 | -0.10 | -0.10 | 0.0 | 12.00 | 12.00 | 2.00 |
| OTHER | 0 | 7 | 17.1 | -0.27 | -0.27 | 0.0 | -0.40 | -0.40 | 0.0 | 10.14 | 10.14 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | |

TEST NO. 1 CTBS,MATH APP,EXP,POST SUBTEST 1

ITEM NUMBER 25 COEFFICIENTS OF CORRELATION MEANS

| | OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 0 | 8 | 9.8 | -0.15 | -0.15 | 0.0 | -0.26 | -0.26 | 0.0 | | 10.75 | 10.75 | 2.00 |
| C | 2 | 1 | 9 | 22.0 | 0.20 | 0.20 | 0.0 | 0.28 | 0.28 | 0.0 | C | 14.89 | 14.89 | 2.00 |
| | 3 | 0 | 15 | 36.6 | 0.22 | 0.22 | 0.0 | 0.28 | 0.28 | 0.0 | | 14.47 | 14.47 | 2.00 |
| | 4 | 0 | 5 | 12.2 | -0.11 | -0.11 | 0.0 | -0.18 | -0.18 | 0.0 | | 11.60 | 11.60 | 2.00 |
| | OTHER | 0 | 0 | 19.5 | -0.27 | -0.27 | 0.0 | -0.38 | -0.38 | 0.0 | | 10.38 | 10.38 | 2.00 |
| | TOTAL | | 41 | | | | | | | | | | | |

C T B S

MATH CONCEPTS

TEST NO 1 CTBS,EXP,POST,MATH CONCEPTS SUBTEST 1

ITEM NUMBER 6 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | | -0.05 | -0.05 | 0.0 | -0.11 | -0.11 | 0.0 | | 12.50 | 12.50 | 2.00 |
| C 2 | 1 | 33 | 80.5 | C | 0.34 | 0.34 | 0.0 | 0.48 | 0.48 | 0.0 | C | 14.18 | 14.18 | 2.00 |
| 3 | 0 | 1 | 2.4 | | -0.16 | -0.16 | 0.0 | -0.44 | -0.44 | 0.0 | | 9.00 | 9.00 | 2.00 |
| 4 | 0 | 4 | 9.8 | | -0.15 | -0.15 | 0.0 | -0.26 | -0.26 | 0.0 | | 11.50 | 11.50 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 7 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 7.3 | | 0.03 | 0.03 | 0.0 | 0.07 | 0.07 | 0.0 | | 14.00 | 14.00 | 2.00 |
| C 2 | 1 | 22 | 53.7 | C | 0.13 | 0.13 | 0.0 | 0.17 | 0.17 | 0.0 | C | 14.00 | 14.00 | 2.00 |
| 3 | 0 | 5 | 12.2 | | 0.05 | 0.05 | 0.0 | 0.08 | 0.08 | 0.0 | | 14.00 | 14.00 | 2.00 |
| 4 | 0 | 10 | 24.4 | | -0.09 | -0.09 | 0.0 | -0.12 | -0.12 | 0.0 | | 12.80 | 12.80 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 8 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 19.5 | | -0.24 | -0.24 | 0.0 | -0.34 | -0.34 | 0.0 | | 11.38 | 11.38 | 2.00 |
| 2 | 0 | 11 | 26.8 | | 0.02 | 0.02 | 0.0 | 0.03 | 0.03 | 0.0 | | 13.64 | 13.64 | 2.00 |
| 3 | 0 | 6 | 14.6 | | -0.19 | -0.19 | 0.0 | -0.29 | -0.29 | 0.0 | | 11.50 | 11.50 | 2.00 |
| C 4 | 1 | 15 | 36.6 | C | 0.38 | 0.38 | 0.0 | 0.48 | 0.48 | 0.0 | C | 15.60 | 15.60 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.20 | -0.20 | 0.0 | -0.54 | -0.54 | 0.0 | | 8.00 | 8.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 9 — COEFFICIENTS OF CORRELATION — MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 14 | 34.1 | | -0.13 | -0.13 | 0.0 | -0.16 | -0.16 | 0.0 | | 12.71 | 12.71 | 2.00 |
| 2 | 0 | 7 | 17.1 | | -0.20 | -0.20 | 0.0 | -0.30 | -0.30 | 0.0 | | 11.57 | 11.57 | 2.00 |
| C 3 | 1 | 15 | 36.6 | C | 0.41 | 0.41 | 0.0 | 0.53 | 0.53 | 0.0 | C | 15.80 | 15.80 | 2.00 |
| 4 | 0 | 4 | 9.8 | | -0.15 | -0.15 | 0.0 | -0.26 | -0.26 | 0.0 | | 11.50 | 11.50 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.13 | -0.13 | 0.0 | -0.34 | -0.34 | 0.0 | | 10.00 | 10.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTRS,EXP,POST,MATH CONCEPTS SUBTEST 1

ITEM NUMBER 10

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 2 | 4.9 | | -0.05 | -0.05 | 0.0 | -0.11 | -0.11 | 0.0 | | 12.50 | 12.50 | 2.00 |
| 2 | 0 | 17 | 41.5 | | -0.10 | -0.10 | 0.0 | -0.13 | -0.13 | 0.0 | | 12.94 | 12.94 | 2.00 |
| 3 | 0 | 11 | 26.8 | | -0.07 | -0.07 | 0.0 | -0.09 | -0.09 | 0.0 | | 13.00 | 13.00 | 2.00 |
| C 4 | 1 | 8 | 19.5 | C | 0.32 | 0.32 | 0.0 | 0.46 | 0.46 | 0.0 | C | 16.25 | 16.25 | 2.00 |
| OTHER | 0 | 3 | 7.3 | | -0.14 | -0.14 | 0.0 | -0.26 | -0.26 | 0.0 | | 11.33 | 11.33 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 11

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | | -0.17 | -0.17 | 0.0 | -0.29 | -0.29 | 0.0 | | 11.25 | 11.25 | 2.00 |
| 2 | 0 | 3 | 7.3 | | -0.07 | -0.07 | 0.0 | -0.14 | -0.14 | 0.0 | | 12.33 | 12.33 | 2.00 |
| 3 | 0 | 5 | 12.2 | | -0.23 | -0.23 | 0.0 | -0.37 | -0.37 | 0.0 | | 10.80 | 10.80 | 2.00 |
| C 4 | 1 | 28 | 68.3 | C | 0.43 | 0.43 | 0.0 | 0.56 | 0.56 | 0.0 | C | 14.71 | 14.71 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 12

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 37 | 90.2 | C | 0.26 | 0.26 | 0.0 | 0.43 | 0.43 | 0.0 | C | 13.84 | 13.84 | 2.00 |
| 3 | 0 | 3 | 7.3 | | -0.10 | -0.10 | 0.0 | -0.18 | -0.18 | 0.0 | | 12.00 | 12.00 | 2.00 |
| 4 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 13

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | | 0.06 | 0.06 | 0.0 | 0.10 | 0.10 | 0.0 | | 14.25 | 14.25 | 2.00 |
| 2 | 0 | 18 | 43.9 | | -0.11 | -0.11 | 0.0 | -0.13 | -0.13 | 0.0 | | 12.94 | 12.94 | 2.00 |
| 3 | 0 | 2 | 4.9 | | -0.31 | -0.31 | 0.0 | -0.67 | -0.67 | 0.0 | | 7.50 | 7.50 | 2.00 |
| C 4 | 1 | 16 | 39.0 | C | 0.32 | 0.32 | 0.0 | 0.41 | 0.41 | 0.0 | C | 15.19 | 15.19 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTBS,EXP,POST,MATH CONCEPTS SUBTEST 1

ITEM NUMBER 14 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 19 | 46.3 | C | 0.52 | 0.52 | 0.0 | 0.66 | 0.66 | 0.0 | C | 15.89 | 15.89 | 2.00 |
| 2 | 0 | 2 | 4.9 | | -0.08 | -0.08 | 0.0 | -0.16 | -0.16 | 0.0 | | 12.00 | 12.00 | 2.00 |
| 3 | 0 | 7 | 17.1 | | -0.48 | -0.48 | 0.0 | -0.72 | -0.72 | 0.0 | | 8.86 | 8.86 | 2.00 |
| 4 | 0 | 11 | 26.8 | | 0.02 | 0.02 | 0.0 | 0.03 | 0.03 | 0.0 | | 13.64 | 13.64 | 2.00 |
| OTHER | 0 | 2 | 4.9 | | -0.34 | -0.34 | 0.0 | -0.72 | -0.72 | 0.0 | | 7.00 | 7.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 15 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 32 | 78.0 | C | 0.25 | 0.25 | 0.0 | 0.34 | 0.34 | 0.0 | C | 14.03 | 14.03 | 2.00 |
| 2 | 0 | 3 | 7.3 | | -0.31 | -0.31 | 0.0 | -0.59 | -0.59 | 0.0 | | 8.67 | 8.67 | 2.00 |
| 3 | 0 | 5 | 12.2 | | -0.13 | -0.13 | 0.0 | -0.20 | -0.20 | 0.0 | | 12.00 | 12.00 | 2.00 |
| 4 | 0 | 1 | 2.4 | | 0.13 | 0.13 | 0.0 | 0.35 | 0.35 | 0.0 | | 17.00 | 17.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 16 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 10 | 24.4 | | -0.31 | -0.31 | 0.0 | -0.43 | -0.43 | 0.0 | | 11.10 | 11.10 | 2.00 |
| 2 | 0 | 1 | 2.4 | | -0.20 | -0.20 | 0.0 | -0.54 | -0.54 | 0.0 | | 8.00 | 8.00 | 2.00 |
| C 3 | 1 | 26 | 63.4 | C | 0.56 | 0.56 | 0.0 | 0.72 | 0.72 | 0.0 | C | 15.31 | 15.31 | 2.00 |
| 4 | 0 | 3 | 7.3 | | -0.27 | -0.27 | 0.0 | -0.50 | -0.50 | 0.0 | | 9.33 | 9.33 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.24 | -0.24 | 0.0 | -0.64 | -0.64 | 0.0 | | 7.00 | 7.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 17 COEFFICIENTS OF CORRELATION MEANS

| OPTION | WT | N | P | | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 26 | 63.4 | C | 0.63 | 0.63 | 0.0 | 0.81 | 0.81 | 0.0 | C | 15.54 | 15.54 | 2.00 |
| 2 | 0 | 5 | 12.2 | | -0.23 | -0.23 | 0.0 | -0.37 | -0.37 | 0.0 | | 10.80 | 10.80 | 2.00 |
| 3 | 0 | 1 | 2.4 | | -0.13 | -0.13 | 0.0 | -0.34 | -0.34 | 0.0 | | 10.00 | 10.00 | 2.00 |
| 4 | 0 | 8 | 19.5 | | -0.40 | -0.40 | 0.0 | -0.57 | -0.57 | 0.0 | | 10.00 | 10.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO 1 CTBS,EXP,POS1,MATH CONCEPTS SUBTEST 1

ITEM NUMBER 18

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 17 | 41.5 | -0.01 | -0.01 | 0.0 | -0.01 | -0.01 | 0.0 | | 13.41 | 13.41 | 2.00 |
| C 2 | 1 | 21 | 51.2 | C 0.09 | 0.09 | 0.0 | 0.13 | 0.12 | 0.0 | C | 13.86 | 13.86 | 2.00 |
| 3 | 0 | 1 | 2.4 | -0.05 | -0.05 | 0.0 | -0.14 | -0.14 | 0.0 | | 12.00 | 12.00 | 2.00 |
| 4 | 0 | 1 | 2.4 | -0.20 | -0.20 | 0.0 | -0.54 | -0.54 | 0.0 | | 8.00 | 8.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.02 | -0.02 | 0.0 | -0.05 | -0.05 | 0.0 | | 13.00 | 13.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 19

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 3 | 7.3 | -0.20 | -0.20 | 0.0 | -0.38 | -0.38 | 0.0 | | 10.33 | 10.33 | 2.00 |
| 2 | 0 | 4 | 9.8 | -0.26 | -0.26 | 0.0 | -0.45 | -0.45 | 0.0 | | 10.00 | 10.00 | 2.00 |
| C 3 | 1 | 26 | 63.4 | C 0.57 | 0.57 | 0.0 | 0.74 | 0.74 | 0.0 | C | 15.35 | 15.35 | 2.00 |
| 4 | 0 | 7 | 17.1 | -0.24 | -0.24 | 0.0 | -0.36 | -0.36 | 0.0 | | 11.14 | 11.14 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 20

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 9.8 | -0.05 | -0.05 | 0.0 | -0.09 | -0.09 | 0.0 | | 12.75 | 12.75 | 2.00 |
| C 2 | 1 | 27 | 65.9 | C 0.39 | 0.39 | 0.0 | 0.50 | 0.50 | 0.0 | C | 14.67 | 14.67 | 2.00 |
| 3 | 0 | 7 | 17.1 | -0.26 | -0.26 | 0.0 | -0.38 | -0.38 | 0.0 | | 11.00 | 11.00 | 2.00 |
| 4 | 0 | 2 | 4.9 | -0.08 | -0.08 | 0.0 | -0.16 | -0.16 | 0.0 | | 12.00 | 12.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

ITEM NUMBER 21

| OPTION | WT | N | P | PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | MEANS TT | MEANS EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 24 | 58.5 | C 0.54 | 0.54 | 0.0 | 0.68 | 0.68 | 0.0 | C | 15.42 | 15.42 | 2.00 |
| 2 | 0 | 9 | 22.0 | -0.32 | -0.32 | 0.0 | -0.44 | -0.44 | 0.0 | | 10.89 | 10.89 | 2.00 |
| 3 | 0 | 3 | 7.3 | -0.07 | -0.07 | 0.0 | -0.14 | -0.14 | 0.0 | | 12.33 | 12.33 | 2.00 |
| 4 | 0 | 4 | 9.8 | -0.21 | -0.21 | 0.0 | -0.36 | -0.36 | 0.0 | | 10.75 | 10.75 | 2.00 |
| OTHER | 0 | 1 | 2.4 | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | |

20.

TEST NO 1 CTBS,EXP,POSI,MATH CONCEPTS SUBTEST 1

ITEM NUMBER 22

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| C 2 | 1 | 26 | 63.4 | C | 0.47 | 0.47 | 0.0 | 0.60 | 0.60 | 0.0 | C | 15.00 | 15.00 | 2.00 |
| 3 | 0 | 11 | 26.8 | | -0.26 | -0.26 | 0.0 | -0.34 | -0.34 | 0.0 | | 11.64 | 11.64 | 2.00 |
| 4 | 0 | 3 | 7.3 | | -0.23 | -0.23 | 0.0 | -0.42 | -0.42 | 0.0 | | 10.00 | 10.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 23

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 1 | 1 | 5 | 12.2 | C | 0.43 | 0.43 | 0.0 | 0.69 | 0.69 | 0.0 | C | 18.40 | 18.40 | 2.00 |
| 2 | 0 | 9 | 22.0 | | -0.26 | -0.26 | 0.0 | -0.37 | -0.37 | 0.0 | | 11.33 | 11.33 | 2.00 |
| 3 | 0 | 15 | 36.6 | | 0.07 | 0.07 | 0.0 | 0.09 | 0.09 | 0.0 | | 13.87 | 13.87 | 2.00 |
| 4 | 0 | 8 | 19.5 | | -0.17 | -0.17 | 0.0 | -0.24 | -0.24 | 0.0 | | 12.00 | 12.00 | 2.00 |
| OTHER | 0 | 4 | 9.8 | | 0.00 | 0.00 | 0.0 | 0.00 | 0.00 | 0.0 | | 13.50 | 13.50 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 24

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | | -0.18 | -0.18 | 0.0 | -0.29 | -0.29 | 0.0 | | 11.40 | 11.40 | 2.00 |
| 2 | 0 | 21 | 51.2 | | -0.05 | -0.05 | 0.0 | -0.07 | -0.07 | 0.0 | | 13.24 | 13.24 | 2.00 |
| 3 | 0 | 5 | 12.2 | | -0.04 | -0.04 | 0.0 | -0.06 | -0.06 | 0.0 | | 13.00 | 13.00 | 2.00 |
| C 4 | 1 | 6 | 14.6 | C | 0.20 | 0.20 | 0.0 | 0.30 | 0.30 | 0.0 | C | 15.50 | 15.50 | 2.00 |
| OTHER | 0 | 4 | 9.8 | | 0.10 | 0.10 | 0.0 | 0.17 | 0.17 | 0.0 | | 14.75 | 14.75 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

ITEM NUMBER 25

| OPTION | WT | N | P | | COEFFICIENTS OF CORRELATION PB-ST | PB-TT | PB-EC | B-ST | B-TT | B-EC | | MEANS ST | TT | EC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 5 | 12.2 | | -0.30 | -0.30 | 0.0 | -0.48 | -0.48 | 0.0 | | 10.00 | 10.00 | 2.00 |
| 2 | 0 | 11 | 26.8 | | -0.27 | -0.27 | 0.0 | -0.36 | -0.36 | 0.0 | | 11.55 | 11.55 | 2.00 |
| C 3 | 1 | 22 | 53.7 | C | 0.62 | 0.62 | 0.0 | 0.78 | 0.78 | 0.0 | C | 15.95 | 15.95 | 2.00 |
| 4 | 0 | 2 | 4.9 | | -0.18 | -0.18 | 0.0 | -0.39 | -0.39 | 0.0 | | 10.00 | 10.00 | 2.00 |
| OTHER | 0 | 1 | 2.4 | | -0.35 | -0.35 | 0.0 | -0.94 | -0.94 | 0.0 | | 4.00 | 4.00 | 2.00 |
| TOTAL | | 41 | | | | | | | | | | | | |

TEST NO. 1 CTBS,EXP,POST,MATH CONCEPTS SUBTEST 1

NUMBER OF INDIVIDUALS = 91.00 NUMBER OF ITEMS = 25.00

MEAN = 13.46 HIGHEST SCORE = 24.00

STANDARD DEVIATION = 4.37 LOWEST SCORE = 4.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 90.00 | 30.49 | 0.76 |
| ITEMS | 24.00 | 42.63 | 1.78 |
| RESIDUAL | 960.00 | 181.61 | 0.19 |
| TOTAL | 1024.00 | 254.73 | 0.25 |

HOYT ESTIMATE OF RELIABILITY = 0.75

STANDARD ERROR OF MEASUREMENT = 2.13

TEST NO 1 CTHS.MATH APP.EXP.POST SUBTEST 1

NUMBER OF INDIVIDUALS = 41.00 NUMBER OF ITEMS = 25.00

MEAN = 13.05 HIGHEST SCORE = 22.00

STANDARD DEVIATION = 4.98 LOWEST SCORE = 2.00

| SOURCE OF VARIANCE | D.F. | S.S. | M.S. |
|---|---|---|---|
| INDIVIDUALS | 40.00 | 39.76 | 0.99 |
| ITEMS | 24.00 | 26.34 | 1.10 |
| RESIDUAL | 960.00 | 189.66 | 0.20 |
| TOTAL | 1024.00 | 255.76 | 0.25 |

HOYT ESTIMATE OF RELIABILITY = 0.80

STANDARD ERROR OF MEASUREMENT = 2.18

APPENDIX C
Evaluation Summary

STATE OF MICHIGAN

# DEPARTMENT OF EDUCATION

Lansing, Michigan 48909

DR. EUGENE T. PASLOV
Interim Superintendent
of Public Instruction

STATE BOARD OF EDUCATION
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*Ex-Officio*

August 7, 1979

RECEIVED
AUG 9 1979
VOC. ED.
W. W. C. S.

Mr. Paul Poledink
Wayne-Westland Community
Schools
3712 Williams Street
Wayne, Michigan 48184

Dear Mr. Poledink:

Enclosed is a copy of the evaluation summary which I plan to submit to the Department classification committee to aid in their consideration of your project for experimental classification. The information in this evaluation summary is taken from data which was given to me during our visit to your project site as well as information which was sent to me just recently.

Please review this summary carefully. It is the only source of evaluation information which will be presented to the classification committee prior to their meeting. If you have any questions or concerns about this summary, please contact me at (517) 373-1830.

Sincerely,

Robert A. Carr

Robert A. Carr
E and D Evaluator

RAC/rd
Attachment



MICHIGAN
THE GREAT LAKE STATE

PROJECT CLASSIFICATION ABSTRACT

DATA CHECK-OFF SHEET

Project Title: Experienced Based Career Education (EBCE)

Location: Wayne-Westland Community Schools and Waterford Public Schools

W = Waterford
WW = Wayne-Westland

| | 1976-77 | 1977-78 | 1978-79 |
|---|---|---|---|
| 1. Cost-to-date: | | | |
| ESEA Title IV-C | -0- | -0- | -0- |
| Local (materials, space, etc.) | In Kind Contributions | | |
| Other (specify) from USOE Vocational Education Part D (Exemplary Programs in Vocational Education) | W-$110,000 | W-$110,000<br>WW 96,800 | W-$110,000<br>WW 110,500 |
| | | Total: | $537,300 |
| 2. Number of Participants: | | | |
| Teachers: | W - 1 | W 2<br>WW 2 | W 2<br>WW 3 |
| Students: | W 28 | W 58<br>WW 60 | W 58<br>WW 100 |
| Parents: | W 56 | W 116<br>WW 120 | W 116<br>WW 200 |
| Para-professionals: | W 3 | W 3<br>WW 2 | W 3<br>WW 2 |
| Others (specify) Community Instructors | W 50 | W 70<br>WW 75 | W 125<br>WW 115 |
| Grant Administrator | W 1 | W 1<br>WW 1 | W 1<br>WW 1 |

3. Replication Site: Grand Rapids Union High School

4. MEAP Data (if appropriate): N/A

5. Recommendation: Given the data available for analysis at this time, the Office of Career Education staff has determined that this project meets the criteria established by the Project Classification Committee and therefore recommends that the project be classified as an Experimental Site. The Experimental and Demonstration Centers Program staff concurs with this recommendation.

PROJECT CLASSIFICATION ABSTRACT

Category: Experimental

Project Title: Experience Based Career Education (EBCE)

Location: Wayne-Westland Community Schools and Waterford Public Schools

Nominating Service Area: Office of Career Education/E & D Centers Program

Introduction (Describe major goals, clients, and typical learning activities):

Experience Based Career Education (EBCE) is a fundamentally different type of education for secondary students. While students in traditional programs attend classes all day at the high school, EBCE students spend a major portion of their time on learning projects in the community. Activities are tailored to individual student needs, abilities, learning styles and goals. Students are guided in their learning by ongoing relationships with working adults in laboratories, offices, factories, shops, hospitals, schools, courtrooms, studios - wherever careers are practiced.

As a prelude to lifelong career development, EBCE students are encouraged to explore and learn at a variety of community and employer sites. EBCE focuses on career decision-making skills because "career" in its broadest sense means what people do with their lives. Through concentrated, in-depth investigation of selected career sites, EBCE students discover that there are many alternatives open to them. They learn that the timing of career decisions may differ from person to person. They learn to recognize the need for adaptability and flexibility in today's complex world. Many different types of community learning situations are provided. Students gain "hands-on" experience with a variety of skills, but they are not paid for their time on EBCE learning sites.

The curriculum includes experiences in Basic Skills, Life Skills and Career Development and there are identified competencies or coping skills required of each student. Program completion requirements are different from but equal to standard high school requirements and students have opportunities to see how knowledge is integrated when applied in real situations. EBCE emphasizes everyone's need for lifelong practice with the basic tools of learning - reading, writing, speaking, asking questions, computing, finding resources.

EBCE places responsibility for learning directly with the student and students are accountable for their own behavior and progress in the program. The students have access to a wide range of information about themselves - from standardized tests and informal assessments to continual personal interaction with program staff and community participants. Students are constantly matching facts about themselves with their interests and perceived goals. They plan their own projects with the help of staff and community participants and follow through on their individual learning plans at employer/community sites. Student progress is carefully monitored and recorded and guidance is available at every turn to help young people realize their potential.

Each student's learning is individually planned in terms of three content areas: Life Skills, Basic Skills and Career Development. EBCE staff work closely with the student to identify interests and abilities, negotiate learning goals and plan activities and resources that will help the young person move toward broader career and life goals. The student's learning is carefully interwoven so that Life Skills activities involve practice in Basic Skills and help place Career Development experience in perspective.

3.1 Cite evidence that the project meets the developmental/operational criteria.

This project was submitted to the Department during a regular ESEA Title IV-C Application period in a category especially designed to encourage school districts to submit successful projects which had been developed locally with funds or resources other than IV-C and which had high potential for being nominated in either the Experimental or Demonstration category. After the application was reviewed by a panel of experts within and outside the Department and tentatively approved, an on-site team visit was conducted at the project site.

Both of the EBCE sites are replications of a nationally validated program which was developed by the Northwest Regional Educational Laboratory in Portland, Oregon. Both of the Michigan replications have been funded in part by the U.S. Office of Education with Title I, Part D grants for the previous three (3) years. During this time both sites have, at the request of USOE, evaluated their results and disseminated these findings to all interested audiences in the state. The Michigan sites cooperated with Michigan State University and the Office of Career Education, MDE, in conducting an EBCE Awareness conference last February for interested school districts in Michigan. Both Michigan sites use curriculum and staff training materials which were developed at the Northwest Regional Laboratory and have been nationally validated.

The general program goals of EBCE correlate well with many of the "Common Goals of Education", with Office of Career Education's "Career Development Goals and Performance Indicators", and with the "Life Skill Competency Goals and Objectives".

3.2 Cite evidence that the proposed project is an alternative educational strategy which is distinctly different from current educational practices.

Experience Based Career Education, as practiced by the two Michigan sites, incorporates the following strategies which differ from current traditional educational practices:

EBCE is community-based. It utilizes any and all learning resources available to students outside the regular school setting.

EBCE students are asked to spend at least 50% of their school time in the community on learning sites.

EBCE students are individually assessed regarding their abilities, interests, values, past achievements, and future plans, and for each, an individual learning plan is negotiated with the learning manager/teacher.

EBCE learning is predominantly experiential, with the theoretical and conceptual arising out of these experiences.

EBCE attempts to integrate the traditional learning areas into the general life skill areas which will be practiced upon graduation.

EBCE encourages flexible student scheduling to allow for a wide variety of learning experiences.

EBCE emphasizes career development, responsibility, maturity, decision making, and self-determination within the guidelines of the program.

3.3 Describe the proposed evaluation design. (Include such procedures as testing hypothesis, comparison groups, sampling procedures, measuring instruments, test administration, collecting, analyzing, and reporting data)

The 1979-80 Experimental phase evaluation is under discussion between project staff and Department staff. Although details need to be agreed upon, the primary emphasis of the evaluation design will be on student performance. Two areas of student performance which are reasonably certain to be included are (1) knowledge of career development and (2) achievement of life skills. Knowledge of career development is to be assessed using a test instrument compiled for use during the model development phase. Achievement of each life skill requires project students to perform project identified tasks related to the life skill. Acceptable performance is certified by qualified community business of professional persons employed in occupations related to the particular life skill.

The impact of the training of replication site staff as well as the implementation of the project model by replication site staff are to be evaluated, although the details of these evaluation components have yet to be completed and agreed upon.

3.4 Cite evidence of the proposed project's ability and commitment to complete the experiment within the confines of a rigorous experimental model.

The superintendents have given written assurances that the projects will continue next year and that operational costs will be supported with local funds. Staff of both projects have received extensive training and experience over the past three years and will be available next year. The E & D Centers Program staff and the Office of Career Education have made numerous visits to the sites and can substantiate the capabilities of the project staffs and their support systems.

3.5 State cost data which would help determine the potential for replication of the proposed project in other school districts.

Operational costs range from $800 to $1,700 per pupil per year.

Implementation costs are being developed but they need to cover training time for:

1) Administrators and counselors, one day.
2) Prospective EBCE staff, 4-5 days.
3) Follow-up on-site visits, 2-8 days.

Training materials including the program handbooks, approximately $200 per site.

Operational staff: Many school districts use a certified teacher as a learning manager, an employer relations specialist, a secretary, and one or two aides. Operation costs cited above include transportation and insurance costs.

I attest to the accuracy of the information reported in this abstract.

| | | |
|---|---|---|
| Program Supervisor | John R. Osborne<br>Signature | July 30, 1979<br>Date |
| Program Director | Rachael Moreno<br>Signature | August 6, 1979<br>Date |
| Associate Superintendent | Signature | Aug. 6 1979<br>Date |

Project Location : Wayne-Westland
Project Title: Experience Based Career Education

Nominated For: Experimental
Summary Prepared By: Dr. Robert Carr

Since the development of the Experience Based Career Education (EBCE) model in Wayne-Westland (and Waterford) was not funded by ESEA Title IV-C, there is no approved (by MDE) evaluation design in effect. Therefore, the information in this summary is based on data presented by the Wayne-Westland project staff and evaluator.

## SUMMARY OF RESULTS

For career education knowledge, project students showed significantly greater gains than comparison students on three of six test scales. For two of the remaining three scales, project student gains were non-significantly higher than comparison student gains. For the other scale, comparison student gains exceeded project student gains, but much instruction in the area measured by this scale had been delivered to project students prior to the pretesting.

Each project student achieved at least three Life Skill Competencies with 75% of the project students achieving at least seven competencies.

Project students' basic skill performance did not suffer during their participation in project activities. Project students' mean gains were at least as good as, and in some areas better than, comparison students' mean gains on three subscales (1 reading, 2 mathematics) of the Comprehensive Tests of Basic Skills (CTBS).

## Evaluation Analysis

Each district, Wayne-Westland and Waterford, is implementing the same basic model as originally developed by Northwest Regional Educational Laboratory. Although many of the variables included in the data collection plans of each district are similar, the specific type of data varies between the two sites.

The data summaries presented below for Wayne-Westland are provided for each of three major variables in the project's data collection efforts: (I) knowledge of career education, (II) achievement of life skill competencies, and (III) knowledge of basic skills.

In Wayne-Westland two procedures were used to identify and select project and comparison students. Some students, both project and comparison, were selected and invited to participate by using a stratified random sampling procedure which assured a reasonable spread across grade point averages. Because of the difficulty in implementing this selection procedure for large numbers of students, the remaining students accepted for project participation were volunteers. For each project student, two non-project students of the same grade, same sex and similar grade point average were selected. Two comparison groups were formed. Each comparison group was tested with only one of the two major tests taken by project students.

I. Knowledge of Career Education

In Wayne-Westland, nine major goal areas were identified for the project. Associated with these nine goal areas were 34 student objectives. A 65-item

test, the Career Education Skills Test, was developed to assess students in seven of the nine goal areas. This test contains, primarily, items from the original Texas Career Education Measurement Series. Test results are given in Table 1. The scores used for each scale are the numbers of items answered correctly. Results for a Fall pretest and a Spring posttest are given. The t-statistic included in the table provides a test of the significance between the project group mean gain and the comparison group mean gain. A directional test was used.

TABLE 1

CAREER EDUCATION SKILLS TEST RESULTS FOR PROJECT AND COMPARISON STUDENTS

| Goal Area | Group | Number of Students Tested | Pre-Test Mean | Post-Test Mean | Mean Gain | t-stat. (gains) | Significant? (.05) |
|---|---|---|---|---|---|---|---|
| I. Career Planning and Decision Making (11 items) | Project | 40 | 9.50 | 9.73 | .23 | -2.02 | No |
| | Comparison 1 | 33 | 8.58 | 9.48 | .90 | | |
| II. Economic Factors Influencing Career Opportunities (14 items) | Project | 40 | 8.95 | 10.35 | 1.40 | 2.63 | Yes |
| | Comparison 1 | 33 | 8.76 | 8.82 | .06 | | |
| III. Career Interests (8 items) | Project | 40 | 5.90 | 6.78 | .88 | 1.42 | No |
| | Comparison 1 | 33 | 5.79 | 6.12 | .33 | | |
| IV. Job Acquisition V. Job Retention (7 items) | Project | 40 | 5.63 | 5.95 | .32 | 1.10 | No |
| | Comparison 1 | 33 | 5.06 | 5.12 | .06 | | |
| VII. Career Training (17 items) | Project | 40 | 13.43 | 14.58 | 1.15 | 2.36 | Yes |
| | Comparison 1 | 33 | 13.21 | 13.52 | .31 | | |
| IX. Sex Discrimination (8 items) | Project | 40 | 4.05 | 5.25 | 1.20 | 2.89 | Yes |
| | Comparison 1 | 33 | 4.24 | 4.45 | .21 | | |

Goal area VI, developing entry level work skills and goal area VIII, psychological considerations, were not included in the testing.

The project students in Table 1 for goal area I show a relatively high pretest mean, a nearly similar posttest mean and a lower gain than the comparison group. However, much instruction in goal area I was done prior to the pretesting. On three of the five scales the project student mean gains were significantly higher than the comparison student mean gains.

## II. Achievement of Life Skill Competencies

The life skill competencies used in the project originated from the Northwest Regional Educational Laboratory as part of the basic model. Some modifications and additions were made on the original competencies. Wayne-Westland identified thirteen competencies for use in the project. These competencies relate very closely to the Michigan Life Role Competencies.

Acceptable performance on a competency is certified by a project identified community person working in a vocation related to the competency. The distribution of competency achievement is given below in Table 2.

TABLE 2

| Number of Competencies Achieved | Number of Students at Each Competency Achievement Level |
|---|---|
| Less than 3 | 0 |
| 3 | 1 |
| 4 | 1 |
| 5 | 4 |
| 6 | 4 |
| 7 | 8 |
| 8 | 6 |
| 9 | 7 |
| 10 | 9 |
| More than 10 | 0 |
| Total | 40 |

Although each project student was initially expected to achieve five competencies per semester, it was possible for students to negotiate a reduction in the number of competencies attempted. A reduction in competencies was typically granted to a student by project staff if other scheduled project activities e.g., projects, explorations or special placements, would require a greater proportion of project time to complete.

## III. Knowledge of Basic Skills

Because of the amount of time that project students spend in the community in project activities and the time spent in the school on career education, there was some concern about whether the project students' basic skill performance in reading and mathematics would suffer. The project model makes no claim for improvement in basic skills. However, it is expected that basic skill performance will not suffer because of participation in the project. The Comprehensive Test of Basic Skills (CTBS) was used to assess knowledge in reading and mathematics.

TABLE 3

BASIC SKILL TEST RESULTS USING RAW SCORES
FROM THE COMPREHENSIVE TESTS OF BASIC SKILLS (CTBS)

| Area Tested | Group | Number Tested | Fall Pretest Mean | Spring Posttest Mean | Mean Gain |
|---|---|---|---|---|---|
| Reading Comprehension | Project | 41 | 25.56 | 27.80 | 2.24 |
| | Comparison 2 | 32 | 23.03 | 24.00 | .97 |
| Mathematics Concepts | Project | 41 | 13.83 | 13.46 | -.37 |
| | Comparison 2 | 32 | 13.03 | 12.41 | -.63 |
| Mathematics Application | Project | 41 | 10.49 | 13.05 | 2.56 |
| | Comparison 2 | 32 | 10.78 | 10.66 | -.12 |
| Language Mechanics | Project only | 41 | 12.41 | 13.61 | 1.20 |

Project student performance in basic skills as measured by CTBS is at least comparable to, and in some areas exceeds, performance of comparable non-project students. This general pattern of results is also noted when comparisons between project and non-project students are done separately for juniors and then for seniors.